



Rate Proposal for Statewide Email



May 2007

Statewide Email – Rate Proposal

Table of Contents

1.	Overview	1
1.1.	Summary of Service.....	2
1.2.	Summary of Proposed Changes.....	3
2.	Base Mailbox	8
2.1.	Description of Product.....	8
2.2.	Rate Methodology	8
2.3.	Policy Objective.....	8
2.4.	Cost Recovery Objective	8
2.5.	Customer Adoption Assumption	9
2.6.	Economies of Scale.....	13
2.7.	Cost and Revenue Forecast.....	14
2.8.	Cost per Billable Unit at Standard Break Even Points	15
2.9.	Financial Risk Analysis	16
2.10.	Proposed Rate.....	17
3.	Email Storage	19
3.1.	Brief Summary of Product.....	19
3.2.	Summary of proposed change.....	19
3.2.1.	Rationale for change.....	20
3.2.2.	Business factors driving change.....	21
3.3.	Summary of Business Impacts.....	21
3.3.1.	Impact of Billing Metric Change.....	21
3.3.2.	Financial Impact	21
4.	Mobile Device	23
4.1.	Brief Summary of Product.....	23
4.2.	Summary of proposed change.....	23
4.3.	Summary of Analysis.....	23
4.3.1.	Rationale for change.....	23
4.3.2.	Business factors driving change.....	23
4.3.3.	Rate Setting Methodology Used.....	23
4.3.4.	Analysis Detail.....	23
4.4.	Financial Impact	25
5.	Migration Services	26

Appendix A: Base Mailbox - Cost Components and Operational Assumptions

Appendix B: Base Mailbox - Cost Component Detail at Volume

Appendix C: Base Mailbox - Rate and Volume Scenario Analysis

Appendix D: Mobile Device – Cost Components and Operational Assumptions

Statewide Email – Rate Proposal

1. Overview

The Department of Technology Services (DTS) has enhanced its existing Exchange infrastructure as part of a larger effort to meet the statewide messaging needs of California's government agencies. The infrastructure enhancements provision for a standard email system offers users a set of new features. At the September 27, 2006 meeting, the Board approved the DTS plan to publish planning rates to allow customers to begin to assess the value of the service. The planning rates represented changes to existing rates as follows:

- A \$2 reduction to the Base Mailbox rate brings it to \$6.
- No Change to Storage Rate, but provide an additional tier at 500MB.
- Increase the Blackberry rate to \$6.50 per user to recover costs.
- Migration charged as a pass-through that could be spread over 24 months.

This rate proposal differs from the planning rates for the Storage and Blackberry charges. This rate proposal represents the formalization of the enhanced Statewide Email offering and will establish the formal rate levels and structure.

Central to this rate package is the proposal of a discounted Base Mailbox rate to encourage customer adoption of the service. The proposed discounted rate is expected to result in a one-time subsidization of the Base Mailbox product. Consistent with the DTS Rate Methodology, the financial implications of this temporary subsidization have been estimated and presented for stakeholder consideration in the rate proposal.

Based on the financial analysis performed in support of this proposal, the following key conclusions were made regarding the Base Mailbox:

- There are significant economies of scale to be achieved through the growth of the Statewide Email service. (Section 2.6)
- There is very little risk of underutilization of the email service creating a significant upward pressure on other rates. (Section 2.9)
- The proposed mailbox rate, which is discounted for the purpose of promoting customer adoption of the service does not result in a material upward pressure on other service rates and in fact produces a slight downward pressure on rates over the period analyzed. (Section 2.10)

In addition to the Base Mailbox rate, the proposal also addresses the rates for Email Storage, Mobile Devices and the cost recovery mechanism for Migration of customer mailboxes to the Statewide Email service. The proposed rates are as follows:

Proposed Rates for Statewide Email			
Product	Rate	Billable Unit	Effective Date
Base Mailbox	\$6.00	/mailbox/month	1/1/2007
Storage	\$18.35	/GB months used	1/1/2007
Mobile Device	\$7.50	/user/month	7/1/2007
Migration	Pass-through of Actual Cost with payment spread up to 24 months		7/1/2007

Statewide Email – Rate Proposal

1.1. Summary of Service

The DTS Messaging service currently consists of two distinct email environments: Exchange 5.5 and Exchange 2003. The DTS is in the process of retiring the Exchange 5.5 product and recently enhanced the quality and features of Exchange 2003 to create the Statewide Email service. The following is a list of messaging products related to the Statewide Email offering:

Base Mailbox – The basic functionality expected of the standard email mailbox product: an address, calendar, tasks, web access, spam and virus protection.

Email Storage - The disk storage required to store customer mailbox data including Inbox, Tasks, Contacts, Calendar, Deleted Items, Sent Items and personal folders. Included in the service offering is a nightly backup of user mailboxes and public folders. Mailbox data backups are retained for 28 days. Individual departments are able to extend this retention policy, if needed.

Mobile Device – This service provides users the ability to work with wireless devices. Users are able to send and receive messages instantly, open and review attachments and calendar, and access contact information.

Migration – The DTS can provide consulting services to perform migration assessments and services for customers currently running Microsoft Exchange, GroupWise or Lotus Notes email systems.

Statewide Email – Rate Proposal

1.2. Summary of Proposed Changes

This rate proposal establishes a new rate structure for the Statewide Email offering and proposes the temporary subsidization of the base mailbox rate in order to promote the adoption of this shared service. The tables below compare the old rates and rate structure for email services with the proposed rates and rate structure for the enhanced offering under Statewide Email. As shown in the first table, the old rate structure bundles the mailbox and storage together into one charge and provides five monthly subscription choices based on mailbox storage thresholds. The effective rates of the two bundled components are \$8.05 for the Base Mailbox and \$26.60/ GB of storage subscribed.

Current Rates and Structure	
Mailbox with Storage Tier	Monthly Rate (\$8.05/Mailbox + \$26.60/GB)
50 MB	\$9.38
100 MB	\$10.17
200 MB	\$13.37
1 GB	\$34.65
2 GB	\$61.22

The proposed rate structure unbundles mailbox and storage rates. This allows customers to pay for only the storage they use as a whole organization and simplifies billing to one Email Storage charge per customer. For the purpose of comparing rate levels, the current structure is shown unbundled in the table below.

Comparison of Current and Proposed Rates					
Product	Current Rates		Proposed Rates		Effective Date
	Rate	Billable Unit	Rate	Billable Unit	
Base Mailbox	\$8.05	/mailbox	\$6.00	/mailbox	1/1/2007
Storage	\$26.60	/GB subscribed	\$18.35	/GB used	1/1/2007
Mobile Device	\$2.38	/user	\$7.50	/user	7/1/2007
Migration	Not Established		Pass-through of Actual Cost with payment spread up to 24 months		7/1/2006

Base Mailbox

The Base Mailbox rate was set using the Temporary Subsidization process of the DTS Rate Methodology. The table below provides a summary of the information required by the Temporary Subsidization Methodology. These requirements are discussed in the cited sections of this proposal:

Summary of Required Information for Temporary Subsidization
Policy Objective for Temporary Subsidization (Section 2.3): Promote customer adoption of Statewide Email Service
Cost Recovery Objective (Section 2.4): Monthly Revenue should meet or exceed the Monthly Total Cost within 34 months
Customer Adoption Assumption (Section 2.5): The DTS will be supporting 50,000 mailboxes by October 2009

Statewide Email – Rate Proposal

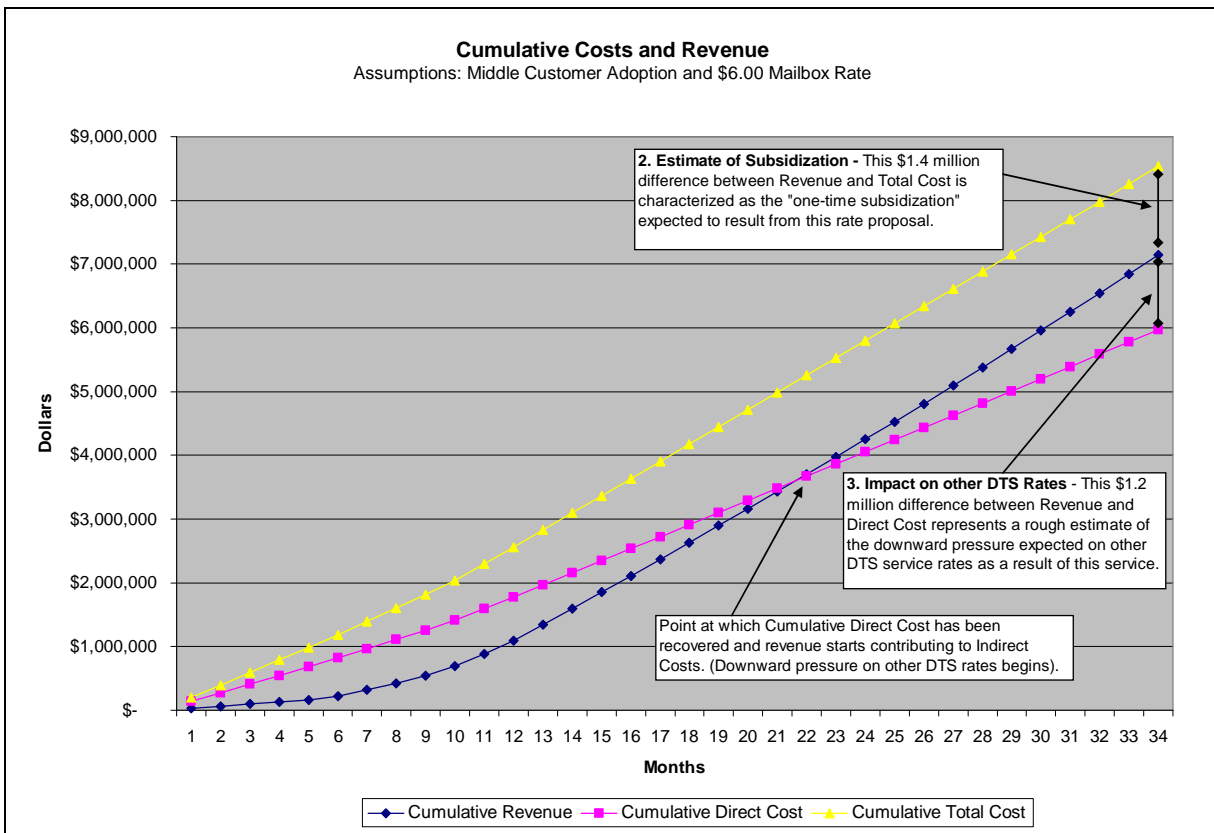
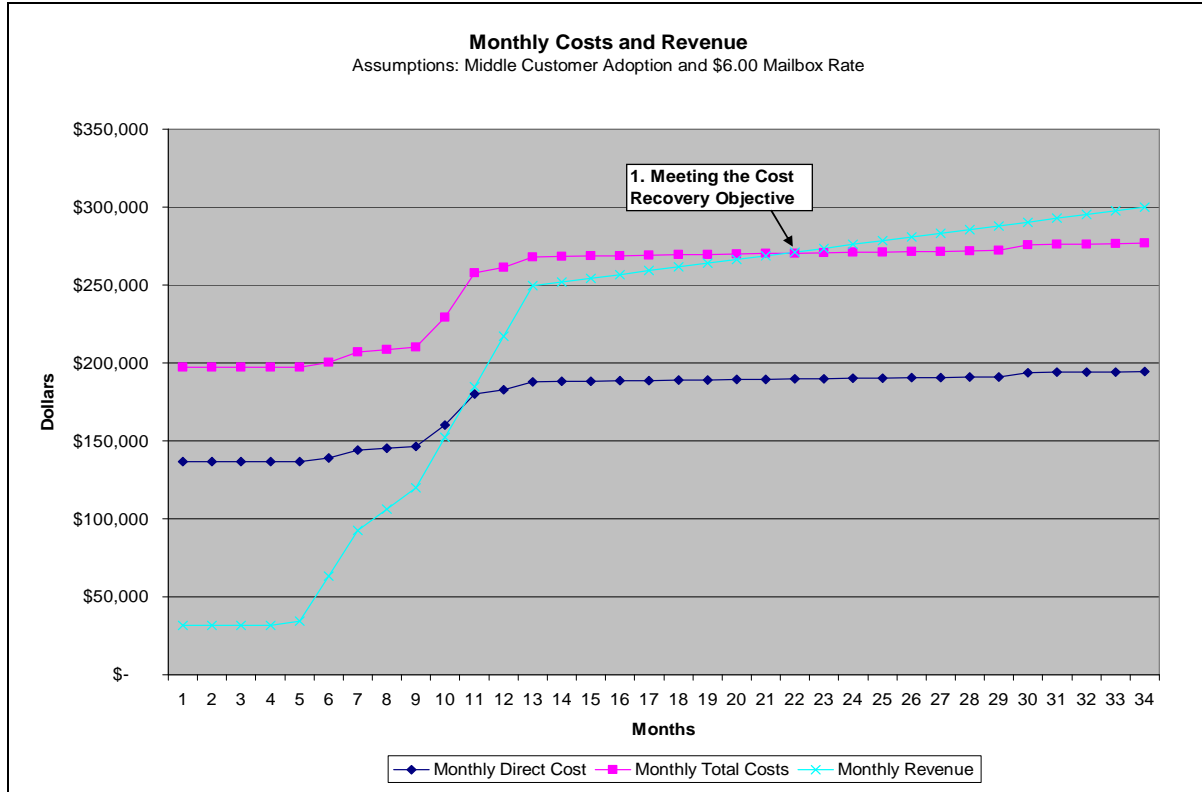
Based on the assumptions stated above, the cost analysis indicates a monthly rate of \$5.54 per mailbox. However, the DTS is proposing a monthly rate of \$6.00 (see Section 2.10 for additional detail) in order to mitigate the risk of increasing the rate at a later date due to customer adoption being less than assumed or the addition of new features. The financial implications of this rate level are summarized below:

1. **Meeting the Cost Recovery Objective** – With the higher \$6.00 rate, the DTS would achieve the Cost Recovery Objective at the volume of 45,000 mailboxes, which occurs in June 2008 per the Customer Adoption Assumption.
2. **Estimate of Subsidization** - The revenue to be collected through the Base Mailbox rate over that period is estimated to be \$1.4 million less than the Total Cost¹ (Direct and Indirect Cost of Service) of the service. The estimated subsidization represents approximately 0.25 percent (quarter of one percent) of the Total Cost of all DTS services over the transition period. This would be the total one-time “subsidization” of the service.
3. **Impact on other DTS rates** - The revenue over the transition period is expected to exceed the Direct Cost of Base Mailbox product by \$1.2 million. Because Direct Cost is roughly the actual cost of the service, the \$1.2 million is a downward pressure on all other DTS rates because it is recovering Indirect Costs that no longer need to be recovered through other rates.

¹ All costs discussed in this proposal are based on the DTS cost accounting practices, meaning that each cost component is spread over its useful life and cost components that are shared between services are allocated to each based on some allocation metric or assumption. The following are key terms related to cost accounting and rate development that are used throughout this proposal:

- **Direct Cost** – Direct costs are those that can be easily attributed to a service. Essentially the labor and materials that go directly into producing the service. For most services, Direct Cost is a reasonable proxy for the actual cost to DTS of providing the service.
- **Indirect Costs** – Indirect Costs are those that are not direct to one service, but rather perform a function that benefits all services. Indirect costs include functions such as Service Desk, Change Management, Security, and the more traditional “overhead” such as Customer Relations and Administrative functions including facilities, human resources, and financial management. Government Cost Accounting principles require that each service be allocated its fair share of these costs. As a result of this requirement, a new service or one that is expected to grow rapidly will be *allocated* substantially more Indirect Costs than it actually creates because the Indirect Cost functions do not grow proportionally to the growth of a service, if at all.
- **Total Cost** – Total Cost is the sum of Direct and Indirect Costs.
- **Monthly vs Cumulative** – Monthly Cost (Total or Direct) is the cost estimated in a given month based on an assumption of volume. Cumulative Cost (Total or Direct) is the sum of the Monthly costs over a period of time.

Statewide Email – Rate Proposal



Statewide Email – Rate Proposal

Email Storage

The DTS proposes to change the rate structure for Email Storage from being bundled with the Base Mailbox in a monthly, tiered subscription charge to a structure that charges a customer by how much storage is actually used by all of the customer's mailboxes. The proposed structure will result in less units of storage being billed (assuming utilization doesn't change) because utilization is assumed to be less than the amount subscribed. The cost of providing the Email Storage product was analyzed in detail for this proposal and was found to be consistent with the \$18.35 Enterprise Storage rate that is currently published. Consistent with the DTS initiative to simplify and consolidate the management of storage services to internal and external customers, the DTS is proposing to eliminate any storage rates specific to email and instead use the Enterprise Storage rate of \$18.35. This rate change is proposed to be effective on January 1, 2007 in order to align with the new rate structure proposed for the service.

Mobile Device

The current rate charged for the DTS Mobile Device product is \$2.38/User. This rate is only sufficient to cover the per user license costs for this product, leaving the staff, hardware and remaining software costs to be recovered through other rates. The DTS proposes to increase this rate to \$7.50/User in order to align the rate for this product more appropriately with the cost to provide it. The volume of users has a profound effect on the rate for this product. As such, the DTS will reevaluate the assumptions as a clearer picture of 2007-08 growth materializes and make a mid-year proposal to reduce the rate, if warranted.

Migration

The cost of migrating a customer from their existing email system to Statewide Email can represent a significant effort and expense. The effort and expense is expected to vary widely by customer due to geography, the customer's source email system, the migration approach selected, and the availability of customer resources. The DTS decided that it would not be appropriate to build migration costs into the base mailbox rate given the following factors:

1. The potential for large variances in per mailbox cost for migration
2. The DTS has current customers that do not require this service
3. Migration costs are a one-time expense

The DTS proposes to charge customers the actual cost of migrations, but allow for payment over a 24-month period so customers may pay as if the cost was built into their mailbox rate. The following table displays rough estimates of the Direct Costs of migration per mailbox assuming average complexity and mailbox synchronization.

	Estimates of Mailbox Migration Costs	
	Source Email Environment	
	Exchange	Non-Exchange
Consulting	\$25	\$45
Migration Licenses	\$12	\$12
DTS Migration environment	\$5	\$5
Total	\$42/mailbox	\$62/mailbox

Statewide Email – Rate Proposal

In addition to the direct costs shown above there will be some amount of administrative fee or overhead charge as well. It is important to note that consulting and migration licensing costs are likely to vary widely from one customer to another and can be reduced significantly by use of a “clean” migration approach, which does not require that the data from the old mail system be migrated or synchronized into Statewide Email service.

Statewide Email – Rate Proposal

2. Base Mailbox

2.1. Description of Product

The Base Mailbox product delivers the basic functionality expected of the standard email mailbox. In addition to the basic email functionality the Base Mailbox product also includes the following features:

- **Virus Protection** – Multi-level protection and hourly anti-virus software updates.
- **Web Access** - Outlook Web Access provides users with access to mailbox data from the Internet.
- **Public Folders** – Public folders give user's a central repository for sharing information. Users can post a variety of information including items such as department messages, contact lists, meeting information and policy documentation.
- **One Employee Directory** – The DTS e-mail maintains and provides one Global Address List (GAL) for state employees that participate in the service offering.
- **Common Calendar and Scheduling Tool** – Users will be able to take advantage of a common calendar and scheduling tool.
- **Spam Filtering** – Spam filtering offers additional protection by blocking e-mail spam and phishing attempts as they enter the e-mail system.
- **Remote Administration** – Customers are able to perform changes to user mailboxes through a new customer administration tool.

2.2. Rate Methodology

The DTS used the Temporary Subsidization rate methodology for the Base Mailbox rate of the Statewide Email service. This report includes the information required of a Temporary Subsidization rate proposal as defined by Section 4.1.2 of the DTS Rate Methodology.

2.3. Policy Objective

The policy objective of the proposed temporary subsidization of the Base Mailbox rate is to promote the adoption of the service by offering it at a competitive price. Further, it is the objective of the DTS that the rate will be based on the expected economies of scale produced at a reasonable assumption of customer adoption. Without the proposed period of subsidization, the first customers to use the service would have to pay higher rates until the economies of scale are achieved over time. However, such a situation would provide customers an incentive to wait and therefore, significantly reduces the chance that sufficient customer adoption would ever occur to create the economies of scale.

2.4. Cost Recovery Objective

The Cost Recovery Objective for the Base Mailbox Rate is to:

Recover 100 percent of the Monthly Total Cost by month 34

Statewide Email – Rate Proposal

This objective means that the rate that is targeted is the monthly Total Cost that is expected in the 34th month from the beginning of the period. “Monthly Total Cost” is the monthly allocation of all direct and indirect costs to the product. The 34 month transition period assumes a January 1, 2007 starting point and an October 31, 2009 ending point. This period was selected based on the following factors:

- Decisions to migrate a critical business application such as email require that customers perform cost/benefit analysis and make internal plans for how the change will effect operations in both the IT and business areas. The proposed transition period allows customers to perform the analysis, prepare for, and execute the migration at the most appropriate point during the period.
- Migration costs may be significant enough for some customers to require a budget adjustment. The proposed period provides for customers to use the full budget development cycle for the 2008-09 fiscal year for any budget requests.
- It is expected that some customers may wait and evaluate the service through the observation of first adopters. This could result in a slow start for customer adoption that ramps up quickly as confidence in the service increases. The 34 month period allows for this potential lag in customer adoption to be considered in the rate calculation, minimizing the “penalty” to early adopters.

The Cost Recovery Objective selected inherently creates a permanent one-time subsidization because the rate will be set to cost at the end of the transition period. The amount of this subsidization is quantified in Section 9 of this report.

2.5. Customer Adoption Assumption

The Temporary Subsidization rate setting Methodology requires that three scenarios be produced for the Customer Adoption Assumption. The Middle assumption is used for determining the proposed rate and quantifying the proposed amount of subsidization. The Low and High scenarios provide for scenario analysis and assist in framing the reasonability of the proposed Customer Adoption Assumption.

General Mailbox Statistics

According to a 2004 survey performed by the Department of Finance the State had approximately 171,000 mailboxes at that time.

The DTS currently supports 18,000 customer mailboxes. 5,300 of which are already supported by the new Statewide Email service. The remaining 12,700 are expected to be upgraded off the Exchange 5.5 environment that is in the process of being retired.

Current Email Customers to be Upgraded	
Customer	Number of Mailboxes
Employment Development	8,900
Office of System Integration – CWS/CMS	3,800
Total	12,700

Statewide Email – Rate Proposal

Current Interest

As illustrated below, the strong interest that the California Department of Corrections and Rehabilitation (CDCR) have shown in the service contributes significantly to the adoption scenarios. The CDCR currently has 20,000 mailboxes with the potential to add 41,000 more if the decision is made that mailboxes are to be provided to all correctional officers. The table lists the other potential customers that have been in contact with the DTS regarding the Statewide Email service:

Customers Indicating Interest (other than CDCR)	
Customer	Number of Mailboxes
Department of Consumer Affairs	2,400
Department of Food and Agriculture	1,400
Board of Equalization	800
Department of Child Support Services	400
Ohlone Community College	300
SBCS Services	200
Total	5,500

At the time of this proposal the DTS has not initiated a proactive marketing effort for this service because the rate has not been formalized. Thus, the DTS views this initial wave of customer initiated contact as an encouraging indication that the new service is perceived as addressing some immediate customer needs. Given the interest already expressed and that the rate being formalized and marketing efforts initiated will develop more interest, it is reasonable to assume that the DTS would be able to attract at least 12,000 mailboxes worth of new business (other than CDCR) over the 34 month transition period.

Statewide Email – Rate Proposal

Scenarios

Customer Adoption Scenarios	
Scenario	Description
Low	<p>Assumptions:</p> <ul style="list-style-type: none"> • Migration of current customers is completed within the first 9 months • CDCR chooses not to use the DTS • Minimal adoption of the service – 12,000 • New service growth is modeled as a linear projection from May 2007 to October 2009. <p>Monthly volume at end of transition period: 30,000 mailboxes</p> <p>Cumulative volume at end of transition period: 720,550 mailbox months</p>
Middle	<p>Assumptions:</p> <ul style="list-style-type: none"> • Migration of current customers is completed within the first 9 months • Existing 20,000 CDCR mailboxes are transitioned during the fall of 2007 at a pace of 5,000 per month • Minimal adoption of the service by others – 12,000 • New service growth is modeled as a linear projection from May 2007 to October 2009 unless stated otherwise. <p>Monthly volume at end of transition period: 50,000 mailboxes</p> <p>Cumulative volume at end of transition period: 1,190,550 mailbox months</p>
High	<p>Assumptions:</p> <ul style="list-style-type: none"> • Migration of current customers is completed within the first 9 months • Existing 20,000 CDCR mailboxes are transitioned during the fall of 2007 at a pace of 5,000 per month • Additional 41,000 CDCR mailboxes are requested and implemented during Summer/Fall of 2008 • Minimal adoption of the service by others – 15,000 • New service growth is modeled as a linear projection from May 2007 to October 2009 unless stated otherwise. <p>Monthly volume at end of transition period: 94,000 mailboxes</p> <p>Cumulative volume at end of transition period: 1,667,550 mailbox months</p>

Statewide Email – Rate Proposal

STATEWIDE EMAIL - Customer Adoption Assumption

Volume Scenario Detail - Base Mailbox

Low			Middle			High		
Month	Users	Adoption Assumption Detail	Month	Users	Adoption Assumption Detail	Month	Users	Adoption Assumption Detail
0	5,300		0	5,300		0	5,300	
Jan-07	1	5,300	1	5,300	• Migration of current customers is completed within the first 9 months	1	5,300	• Migration of current customers is completed within the first 9 months
Feb-07	2	5,300	2	5,300		2	5,300	
Mar-07	3	5,300	3	5,300	• Minimal adoption of the service by others – 12,000	3	5,300	• Minimal adoption of the service by others – 15,000
Apr-07	4	5,300	4	5,300		4	5,300	
May-07	5	5,700	5	5,700	Spread total 12,000 evenly over 30 months starting January 07	5	5,800	Spread total 15,000 evenly over 30 months starting January 07
Jun-07	6	10,550	6	10,550		6	10,750	
Jul-07	7	15,400	7	15,400		7	15,700	
Aug-07	8	17,700	8	17,700		8	18,100	
Sep-07	9	20,000	9	20,000		9	20,500	
Oct-07	10	20,400	10	25,400	First CDCR Migration Begins	10	26,000	First CDCR Migration Begins
Nov-07	11	20,800	11	30,800	5,000/month for 4 months	11	31,500	5,000/month for 4 months
Dec-07	12	21,200	12	36,200		12	37,000	
Jan-08	13	21,600	13	41,600		13	42,500	
Feb-08	14	22,000	14	42,000		14	43,000	
Mar-08	15	22,400	15	42,400		15	43,500	
Apr-08	16	22,800	16	42,800		16	44,000	
May-08	17	23,200	17	43,200		17	44,500	
Jun-08	18	23,600	18	43,600		18	45,000	
Jul-08	19	24,000	19	44,000		19	45,500	
Aug-08	20	24,400	20	44,400		20	46,000	
Sep-08	21	24,800	21	44,800		21	46,500	
Oct-08	22	25,200	22	45,200		22	47,000	
Nov-08	23	25,600	23	45,600		23	57,750	Second CDCR Migration Begins
Dec-08	24	26,000	24	46,000		24	68,500	10,250/month for 4 months
Jan-09	25	26,400	25	46,400		25	79,250	
Feb-09	26	26,800	26	46,800		26	90,000	
Mar-09	27	27,200	27	47,200		27	90,500	
Apr-09	28	27,600	28	47,600		28	91,000	
May-09	29	28,000	29	48,000		29	91,500	
Jun-09	30	28,400	30	48,400		30	92,000	
Jul-09	31	28,800	31	48,800		31	92,500	
Aug-09	32	29,200	32	49,200		32	93,000	
Sep-09	33	29,600	33	49,600		33	93,500	
Oct-09	34	30,000	34	50,000		34	94,000	
Nov-09	35	30,200	35	50,500	Assume linear growth to 75,000 to month 84	35	94,120	Assume linear growth to 100,000 to month 84
Dec-09	36	30,400	36	51,000		36	94,240	
Jan-10	37	30,600	37	51,500		37	94,360	
Feb-10	38	30,800	38	52,000		38	94,480	
Mar-10	39	31,000	39	52,500		39	94,600	
Apr-10	40	31,200	40	53,000		40	94,720	
May-10	41	31,400	41	53,500		41	94,840	
Jun-10	42	31,600	42	54,000		42	94,960	
Jul-10	43	31,800	43	54,500		43	95,080	
Aug-10	44	32,000	44	55,000		44	95,200	
Sep-10	45	32,200	45	55,500		45	95,320	
Oct-10	46	32,400	46	56,000		46	95,440	
Nov-10	47	32,600	47	56,500		47	95,560	
Dec-10	48	32,800	48	57,000		48	95,680	
Jan-11	49	33,000	49	57,500		49	95,800	
Feb-11	50	33,200	50	58,000		50	95,920	
Mar-11	51	33,400	51	58,500		51	96,040	
Apr-11	52	33,600	52	59,000		52	96,160	
May-11	53	33,800	53	59,500		53	96,280	
Jun-11	54	34,000	54	60,000		54	96,400	
Jul-11	55	34,200	55	60,500		55	96,520	
Aug-11	56	34,400	56	61,000		56	96,640	
Sep-11	57	34,600	57	61,500		57	96,760	
Oct-11	58	34,800	58	62,000		58	96,880	
Nov-11	59	35,000	59	62,500		59	97,000	
Dec-11	60	35,200	60	63,000		60	97,120	
Jan-12	61	35,400	61	63,500		61	97,240	
Feb-12	62	35,600	62	64,000		62	97,360	
Mar-12	63	35,800	63	64,500		63	97,480	
Apr-12	64	36,000	64	65,000		64	97,600	
May-12	65	36,200	65	65,500		65	97,720	
Jun-12	66	36,400	66	66,000		66	97,840	
Jul-12	67	36,600	67	66,500		67	97,960	
Aug-12	68	36,800	68	67,000		68	98,080	
Sep-12	69	37,000	69	67,500		69	98,200	
Oct-12	70	37,200	70	68,000		70	98,320	
Nov-12	71	37,400	71	68,500		71	98,440	
Dec-12	72	37,600	72	69,000		72	98,560	
Jan-13	73	37,800	73	69,500		73	98,680	
Feb-13	74	38,000	74	70,000		74	98,800	
Mar-13	75	38,200	75	70,500		75	98,920	
Apr-13	76	38,400	76	71,000		76	99,040	
May-13	77	38,600	77	71,500		77	99,160	
Jun-13	78	38,800	78	72,000		78	99,280	
Jul-13	79	39,000	79	72,500		79	99,400	
Aug-13	80	39,200	80	73,000		80	99,520	
Sep-13	81	39,400	81	73,500		81	99,640	
Oct-13	82	39,600	82	74,000		82	99,760	
Nov-13	83	39,800	83	74,500		83	99,880	
Dec-13	84	40,000	84	75,000		84	100,000	

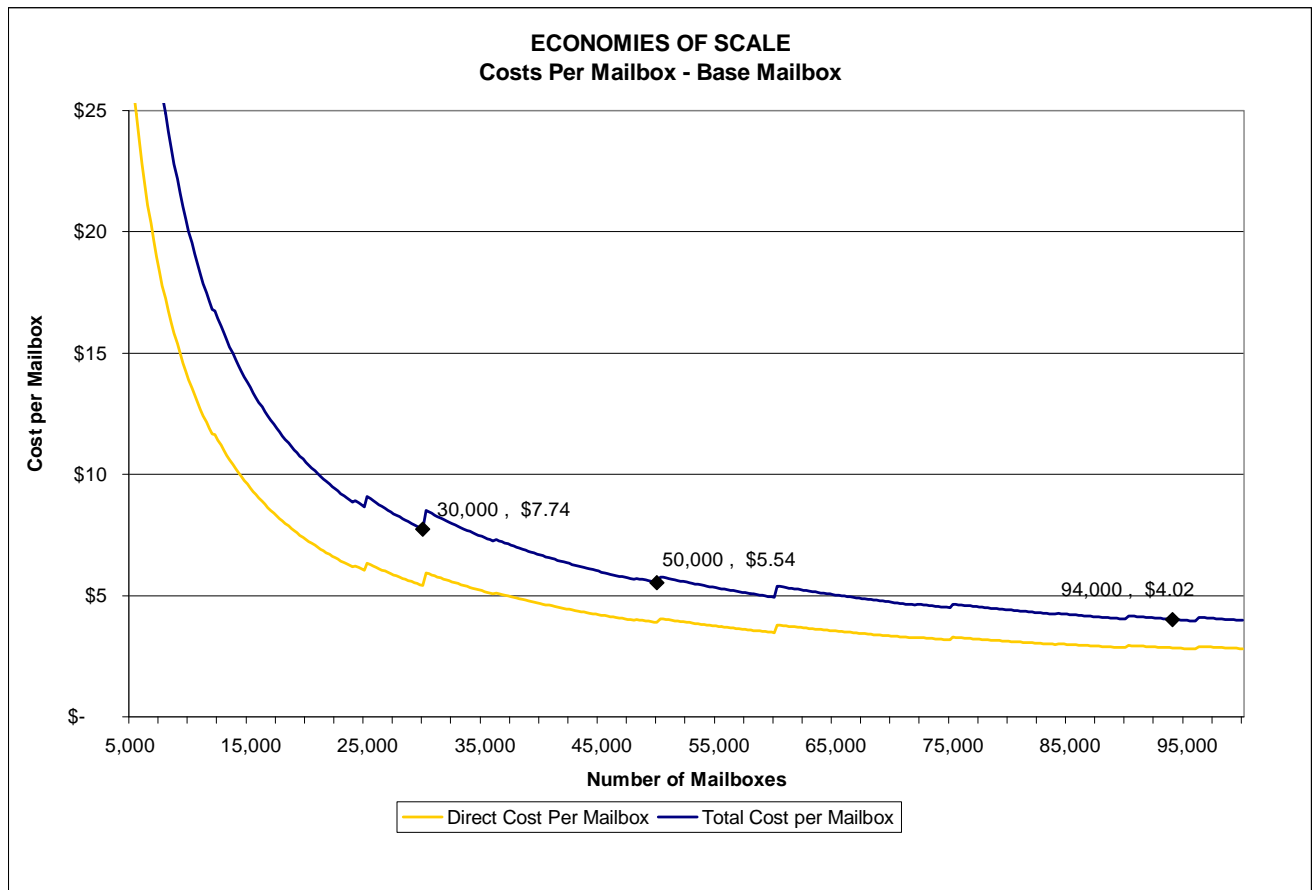
Statewide Email – Rate Proposal

2.6. Economies of Scale

The chart below illustrates the expected Economies of Scale for the Base Mailbox based on the attributes of all cost components as listed in Appendix A. As the chart illustrates, **there are significant economies of scale for the email service.**

Three data points are highlighted on the Total Cost line. These are the volumes at the end of the transition period given the Customer Adoption scenarios above (see Appendix B for additional detail on the cost breakdown at each of these volume levels).

The lower line on this chart represents the Monthly Direct Cost to provide the service. Direct Costs are those that can be directly attributed to the service. It is reasonable to assume that these costs will be similar for any organization that is implementing an email service with similar features and quality. As such, it is important to note that few state departments would have the volume necessary to move materially down the curve displayed here; in fact, few have enough mailboxes to break the 18,000 mailbox volume level the DTS currently supports.



Statewide Email – Rate Proposal

2.7. Cost and Revenue Forecast

The following chart shows the Cost Forecast based on the Middle Customer Adoption Assumption. The first revenue column is based on the \$5.54 per mailbox rate, which is the Monthly Total Cost per mailbox in the 34th month. This is the rate that would be indicated by the Cost Recovery Objective to recover the Monthly Total Cost by the end of the Transition period (34 months). The second revenue column is based on the proposed \$6.00 rate.

Cost and Revenue Forecast					
Months	Mailboxes per Middle CAA	Monthly Direct Cost	Monthly Total Cost	Revenue @ \$5.54/ mailbox	Revenue @ \$6.00/ mailbox
1	5,300	\$ 136,586	\$ 197,254	\$ 29,362	\$ 31,800
2	5,300	\$ 136,586	\$ 197,254	\$ 29,362	\$ 31,800
3	5,300	\$ 136,586	\$ 197,254	\$ 29,362	\$ 31,800
4	5,300	\$ 136,586	\$ 197,254	\$ 29,362	\$ 31,800
5	5,700	\$ 136,712	\$ 197,410	\$ 31,578	\$ 34,200
6	10,550	\$ 139,241	\$ 200,531	\$ 58,447	\$ 63,300
7	15,400	\$ 144,018	\$ 207,024	\$ 85,316	\$ 92,400
8	17,700	\$ 145,155	\$ 208,428	\$ 98,058	\$ 106,200
9	20,000	\$ 146,419	\$ 209,987	\$ 110,800	\$ 120,000
10	25,400	\$ 159,987	\$ 229,194	\$ 140,716	\$ 152,400
11	30,800	\$ 180,095	\$ 257,921	\$ 170,632	\$ 184,800
12	36,200	\$ 182,750	\$ 261,185	\$ 200,548	\$ 217,200
13	41,600	\$ 187,906	\$ 268,117	\$ 230,464	\$ 249,600
14	42,000	\$ 188,159	\$ 268,428	\$ 232,680	\$ 252,000
15	42,400	\$ 188,285	\$ 268,583	\$ 234,896	\$ 254,400
16	42,800	\$ 188,538	\$ 268,894	\$ 237,112	\$ 256,800
17	43,200	\$ 188,665	\$ 269,049	\$ 239,328	\$ 259,200
18	43,600	\$ 188,917	\$ 269,360	\$ 241,544	\$ 261,600
19	44,000	\$ 189,170	\$ 269,670	\$ 243,760	\$ 264,000
20	44,400	\$ 189,297	\$ 269,826	\$ 245,976	\$ 266,400
21	44,800	\$ 189,549	\$ 270,136	\$ 248,192	\$ 268,800
22	45,200	\$ 189,676	\$ 270,292	\$ 250,408	\$ 271,200
23	45,600	\$ 189,929	\$ 270,602	\$ 252,624	\$ 273,600
24	46,000	\$ 190,182	\$ 270,913	\$ 254,840	\$ 276,000
25	46,400	\$ 190,308	\$ 271,068	\$ 257,056	\$ 278,400
26	46,800	\$ 190,561	\$ 271,379	\$ 259,272	\$ 280,800
27	47,200	\$ 190,687	\$ 271,534	\$ 261,488	\$ 283,200
28	47,600	\$ 190,940	\$ 271,844	\$ 263,704	\$ 285,600
29	48,000	\$ 191,193	\$ 272,155	\$ 265,920	\$ 288,000
30	48,400	\$ 193,694	\$ 275,823	\$ 268,136	\$ 290,400
31	48,800	\$ 193,947	\$ 276,133	\$ 270,352	\$ 292,800
32	49,200	\$ 194,074	\$ 276,289	\$ 272,568	\$ 295,200
33	49,600	\$ 194,326	\$ 276,599	\$ 274,784	\$ 297,600
34	50,000	\$ 194,579	\$ 276,910	\$ 277,000	\$ 300,000
Totals	1,190,550	\$ 5,973,304	\$ 8,534,296	\$ 6,595,647	\$ 7,143,300

Statewide Email – Rate Proposal

2.8. Cost per Billable Unit at Standard Break Even Points

From the Cost Forecast the following breakeven points can be calculated:

Cost per Billable Unit at Standard Breakeven Points				
Direct Cost – Monthly Break Even at 34 months				
Monthly Direct Cost at Month 34		=	\$ 194,579	= \$3.89
Volume of Billable Units at Month 34			50,000	
Total Cost – Monthly Break Even at 34 months				
Monthly Total Cost at Month 34		=	\$ 276,910	= \$5.54
Volume of Billable Units at Month 34			50,000	
Direct Cost – Cumulative Break Even at 34 months				
Cumulative Direct Cost over 34 months		=	\$ 5,973,304	= \$5.02
Volume of Billable Units over 34 months			1,190,550	
Total Cost – Cumulative Break Even at 34 months				
Cumulative Total Cost over 34 months		=	\$ 8,534,296	= \$7.17
Volume of Billable Units over 34 months			1,190,550	

Explanations of Standard Breakeven Points:

Direct Cost – Monthly Break Even: Assuming the middle scenario in the Customer Adoption Assumption, the monthly Base Mailbox rate needs to be \$3.89 in order to recover the monthly Direct Cost expected in Month 34 of the transition period (October 2009) based on the expected volume in that month (50,000 mailboxes).

Total Cost – Monthly Break Even: Assuming the middle scenario in the Customer Adoption Assumption, the monthly Base Mailbox rate needs to be \$5.54 in order to recover the monthly Total Cost (Direct + Indirect Cost) expected in Month 34 of the transition period (October 2009) based on the expected volume in that month (50,000 mailboxes).

Direct Cost - Cumulative Break Even: Assuming the middle scenario in the Customer Adoption Assumption, the monthly Base Mailbox rate needs to be \$5.02 in order to recover the cumulative Direct Cost of the service over the 34-month transition period based on the expected cumulative volume over the period (1,190,550 mailbox months).

Total Cost - Cumulative Break Even: Assuming the middle scenario in the Customer Adoption Assumption, the monthly Base Mailbox rate needs to be \$7.17 in order to recover the cumulative Total Cost of the service over the 34-month transition period based on the expected cumulative volume over the period (1,190,550 mailbox months).

Statewide Email – Rate Proposal

2.9. Financial Risk Analysis

This section evaluates the estimated cost recovery given different Volume and Rate assumptions. The scenario analysis performed here is used to evaluate the financial risk to the DTS in terms of cost recovery and the risk to DTS customers of having the Base Mailbox rate increase at the end of the transition period as required by the DTS Guiding Principles for rate setting.

Summary of Analysis

The following table summarizes the key numbers from the scenarios evaluated (see Appendix C for details on each scenario evaluated). The top line of data represents the financial impact of the rate indicated by the Cost Recovery Objective (CRO).

Summary of Scenario Analysis									
			Cost Recovery Status at the End of Transition Period				Rate Realignment Analysis		
Scenario	Rate	CAA	Direct Cost	% of Cost	Total Cost	% of Cost	Rate Change Required	% Change	Annualized Customer Impact
CRO	\$5.54	Middle	\$ 622,343	10.4%	\$(1,938,649)	-22.7%	\$0.00	0.0%	\$0
1		Low	\$(1,129,081)	-22.0%	\$(3,351,492)	-45.6%	\$2.20	40%	\$ 792,000
2	\$6.00	Middle	\$ 1,169,996	19.6%	\$(1,390,996)	-16.3%	(\$0.46)	-8%	\$ (276,000)
3		Low	\$ (797,628)	-15.6%	\$(3,020,039)	-41.1%	\$1.74	29%	\$ 626,400

The third column states the Customer Adoption Assumption (CAA) used in each scenario. For the purpose of analyzing financial risk only the Middle and Low Customer Adoption Assumptions are used here. The Low and Middle assumptions reflect 30,000 and 50,000 mailboxes at the end of the transition period respectively.

Observations:

- Comparing the Total Cost Recovery Status and the Annualized Customer Impact for Scenarios 1 and 3, we see that the difference in rate evaluated here does not have a material effect on mitigating financial risk. Even though the 8% rate increase creates a 20% reduction in the Customer Impact, the total change is less than \$200 thousand spread over 30,000 mailboxes.
- The scenarios evaluated show a mix of over and under recovery in terms of Direct Cost. A positive number (CRO and Scenario 2) in this column is the amount that the Basic Mailbox rate is contributing to the indirect costs of the DTS. A very high percentage of indirect costs charged to the service are existing DTS costs that would have otherwise been charged and recovered through other services. As such, the number in this column roughly indicates the downward pressure created on other DTS service rates as a result of the anticipated growth of the email service.
- A negative number in the Direct Cost column represents unrecovered Direct Costs and is the best proxy for financial loss because Direct Costs are the new costs that the service must recover. As unrecovered new costs to DTS, these figures are a rough indication of the upward pressure on other service rates that the underutilization the Low volume assumption would create. In the scenarios evaluated here, the greatest loss in terms of cumulative Direct Cost is approximately \$1.1 million (Scenario 1). This is the upward pressure that would be created on existing service rates if actual costs and volume occurred consistent with this assumption. Given that current DTS expenditures recovered

Statewide Email – Rate Proposal

through rates are approximately \$200 million per year resulting in a 34 month total of \$567 million, this upward pressure of \$1.1 million represents a 0.2% upward pressure on existing service rates.

Conclusions:

- The price levels evaluated here result in the subsidization being limited primarily to Indirect costs, the vast majority of which would have been recovered through charges to existing customers for existing services. Thus, **there is very little risk of underutilization of the email service creating a significant upward pressure on other rates.**
- Given the range of volumes and rates evaluated here, the financial risk to the DTS is minimal because Direct Costs are adequately recovered.
- The primary risk is the accuracy of customer cost/benefit analysis and budget management issues if the rate had to be increased by 30-40% at the end of the period due to less than anticipated customer adoption.

2.10. Proposed Rate Change for Base Mailbox

The DTS proposes that the Base Mailbox rate be set at \$6.00 per month. At this rate level and the Middle Customer Adoption Assumption (Scenario 2), the DTS expects that there will be a one-time subsidization to Total Cost of the service of approximately \$1.4 million and that the revenue collected over the period would exceed Direct Costs by approximately \$1.2 million. Due to the full recovery of Direct Costs, the Statewide Email service is expected to create a downward pressure on other service rates of approximately \$1.2 million over the transition period and an ongoing downward pressure of at least \$1 million annually. Thus, setting the rate at this level poses very little financial risk to the DTS or the State. As stated in the risk analysis, the primary concern with the rate is the risk of administrative problems if the rate needs to be increased at a later date. The DTS is proposing the \$6.00 rate instead of the \$5.54 rate indicated by this analysis due to that concern. The risk of a rate increase comes from two sources:

1. Actual customer adoption is less than assumed. The Low Customer Adoption Assumption modeled in this analysis assumes that only 12,000 mailboxes are added to the existing service over the 34-month transition period. This is viewed as a very conservative figure given the high visibility and strategic value of the service offering. Therefore, the risk that actual utilization falls short is considered very low.
2. The DTS continues to work on enhancing the service offering with additional features, two of which may materially effect the rate:
 - a. Replication of the infrastructure for failover protection
 - b. Enhanced support for the service on a 24/7 basis

In order to provide these services at a marketable rate the DTS needs to spread costs to a large volume of mailboxes. Thus, wide adoption of the service is seen as a prerequisite for these additional features. These and other significant changes to the service will be vetted through the TSB and appropriate administrative processes prior to implementation.

Statewide Email – Rate Proposal

By setting the rate at \$6.00, the DTS:

- Marginally reduces the risk of substantial under-recovery
- Reduces the size of the increase that may be required later when additional features are added. Under the current model, the cost per mailbox approaches \$4.00 at the 100,000 mailbox level. If it becomes clear that 100,000 mailboxes is an attainable volume level, the \$2.00 difference between cost and the rate would provide a significant portion of the cost recovery required to fund the enhanced features and would provide rate stability throughout the evolution of the service.

The relationship between revenue and cost will be monitored consistent with the reporting requirements of the DTS Rate Methodology and the impact of potential service features will be evaluated and presented for consideration of the TSB as appropriate.

Statewide Email – Rate Proposal

3. Email Storage

The proposed change in how email storage is charged does not create a new rate or change an existing rate. Therefore, this section does not contain all aspects of the typical rate proposal. This section does retain those sections that are appropriate to the proposed change including the rationale for the change and the customer impact of the change.

3.1. Brief Summary of Product

The Storage service provided to the email application includes both the primary storage necessary for customer data and the backup and recovery capabilities as described below:

Primary Storage - Email Storage is the disk storage required to store customer mailbox data including Inbox, Tasks, Contacts, Calendar, Deleted Items, Sent Items and personal folders.

Backup - DTS performs the necessary system backups in order to guarantee both the integrity of customer data stored on the Statewide Email servers, as well as our ability to recover that data as needed. Online backups are done nightly, Monday through Saturday. DTS will maintain enough backup sets to preserve a minimum of 28 days of system backups.

Recovery from Deletion - DTS will configure the Statewide Email Service to ensure that customers can recover email and public folder files from deletion. The recovered data will be available to the requestor within three business days from the date DTS receives the approved customer request.

Email - Users may recover items from their "Deleted Items" folder for up to 14 calendar days (the day of deletion is considered the first day), after which time the Email will be removed from the system.

Public Folders -The owner of the public folder may recover items from a deleted public folder for up to 14 calendar days (the day of deletion is considered the first day), after which, the items will be removed from the system.

3.2. Summary of proposed change

The proposed rate for Storage in connection with the Statewide Email service represents both a rate and billing metric change from the current email storage rates charged by the DTS.

Current Rate

The current DTS email offering uses a tiered subscription rate structure that provides the customer both the mailbox and storage in one charge. Within this bundled rate, the two components are the base mailbox at \$8.05 per mailbox per month and the storage at \$26.60/GB per month (\$8.05 base + \$26.60/GB storage = \$34.65 for a 1 GB mailbox).

Current Tiered Subscription Rates (mailbox+storage)				
50 MB	100 MB	200 MB	1 GB	2 GB
\$ 9.38	\$ 10.17	\$ 13.37	\$ 34.65	\$ 61.22

Statewide Email – Rate Proposal

Proposed Rate Change for Email Storage

The DTS proposes to eliminate any unique storage rate for the email and instead use the published Enterprise Storage Rate of \$18.35 per GB. Email customers will no longer have storage costs bundled with a mailbox or pay a subscription to a certain amount of storage. Instead, each customer will be billed based on the total amount of storage actually used by all the customer's mailboxes. As a result, customers will get one charge for its total number of mailboxes and one Storage charge for the total amount of storage used by all of the customer's mailboxes.

Percent Change

Due to the Billing Metric change from GB *subscribed* to GB *used*, the actual cost change to existing customers will vary due to how much of their subscription they actually used. Assuming that customers are maximizing their subscriptions the change of billing metric would not change the amount of storage they are billed for and thus, the proposed rate change would result in approximately a 30 percent decrease in cost to customers for email storage. This would represent the minimum level of change for customers. If a customer were utilizing only 80 percent of their subscription, this proposal would represent approximately a 45 percent decrease.

Billing Metric change description

Currently, a customer that subscribes to the DTS email service pays for the cost of the mailbox and storage in one mailbox subscription charge. This billing structure results in several issues:

- Customers are discouraged from providing mailboxes to low volume users because they would have to pay for unused or unnecessary storage.
- Large volume differences between subscription tiers at the high end often results in large cost increases as a user goes over the threshold into the next tier, coupled with a significant amount of excess storage that is paid for but not used.
- Customers are charged for more than they actually use, unless their mailbox is at the maximum size of the mailbox tier they are charged for.

Effective Date

The effective date of this proposed change is January 1, 2007 because it must coincide with the Base Mailbox rate change, which no longer includes recovery of storage costs.

3.2.1. Rationale for change

There are three primary reasons behind the proposed change:

- **Consolidation of Storage Services** – The proposed change is consistent with the DTS initiative to provide storage to all internal and external customers in a simplified manner from both the operational and administrative perspectives.
- **Fairness** – Current tiered structure is not efficient for customers with very small or very large mailbox sizes due to high likelihood of being charged for unused capacity.
- **Simplicity** – Charging customers one amount for storage reduces email invoices from five lines to only two.

Statewide Email – Rate Proposal

3.2.2. Business factors driving change

Business Factors Driving Change	
Rationale	Business Factors
Consolidation of Storage Services	<ul style="list-style-type: none">The need to simplify the manner in which storage services are delivered has been a goal of the DTS. Eliminating a number of storage-related rates in the rate schedule is a step in the right direction.
Fairness	<ul style="list-style-type: none">Options to address customer concerns regarding the fairness of the tiered billing structure needed to be evaluated.
Simplicity	<ul style="list-style-type: none">The tiered subscription model requires additional administrative tasks on the DTS side for billing.Managing mailboxes within these tiers creates somewhat arbitrary constraints on the customer's ability to manage mailbox sizes.

3.3. Summary of Business Impacts

3.3.1. Impact of Billing Metric Change

The proposed Billing Metric change from tiered storage subscriptions to actual usage by customer will have the following business impacts on the DTS and its customers:

- Reduce the number of Mailbox/Storage charges from 5 (one for each tier) to 2 (mailbox charge and pooled storage charge). This reduces a small amount of administrative workload for the DTS billing function and simplifies the customer invoice.
- Allow customers to pay only for the storage they use. Billing customers based on the pooled usage lines up with the feature of customer self-administration. If the customer is provided a tool that allows them to impose mailbox limits as they see fit, it is intuitive that the DTS billing model be revised to align storage costs with that new flexibility.

3.3.2. Financial Impact

3.3.2.1. Impact on DTS Revenue and Expenses

Currently the DTS is receiving approximately \$27,000 in monthly revenue from the 5,300 customers currently using the Statewide Email service. Using the average mailbox size assumption of 150mb, and the Enterprise Storage rate of \$18.35, the DTS would collect approximately \$15,250 in monthly revenue, a reduction of 44 percent. The amount of revenue change in total is not material in terms of financial risk, however, as stated above it is the intent of the DTS to align the rate with the cost of the product and the rate will be evaluated as part of the periodic rate maintenance process to ensure proper alignment with cost.

3.3.2.2. Customer Impacts based on stated utilization estimate

The following customer impact analysis is based on a snapshot of utilization taken in March 2007. The first column indicates the estimated storage component of the mailbox subscriptions each customer was billed in March 2007. This serves as the baseline against which two different scenarios are compared. The first scenario assumes that the customer's storage usage does not change as a result of the proposed rate and billing structure change and the second scenario

Statewide Email – Rate Proposal

shows the customer impact if usage is consistent with the DTS assumption of 150 MB per mailbox.

Customer Impacts of Email Storage Rate Proposal (monthly)

Customer	March 2007 Storage Charges	March 2007 Storage Usage with new rate			Assumed Usage (150 MB/mailbox) with new rate		
	\$26.60/GB Subscribed	\$18.35/GB Used	Change	% Change	\$18.35/GB Used	Change	% Change
Alcoholic Beverage Control	\$ 2,095	\$ 672	\$ (1,423)	-68%	\$ 1,346	\$ (748.78)	-36%
California Bay-Delta Authority	\$ 253	\$ 98	\$ (154)	-61%	\$ 272	\$ 19.80	8%
California Workforce Investment Board	\$ 85	\$ 31	\$ (54)	-63%	\$ 63	\$ (21.81)	-26%
Department of Developmental Services	\$ 7,366	\$ 2,250	\$ (5,115)	-69%	\$ 2,235	\$ (5,130.51)	-70%
Department of Social Services	\$ 10,228	\$ 3,771	\$ (6,457)	-63%	\$ 8,882	\$ (1,345.38)	-13%
Office of Systems Integration	\$ 5,251	\$ 1,571	\$ (3,680)	-70%	\$ 1,775	\$ (3,475.48)	-66%
Office of Traffic Safety	\$ 757	\$ 253	\$ (504)	-67%	\$ 113	\$ (643.92)	-85%
Placer County Department of Child Support Services	\$ 438	\$ 111	\$ (326)	-75%	\$ 173	\$ (264.16)	-60%
State Council on Developmental Disabilities	\$ 539	\$ 161	\$ (378)	-70%	\$ 377	\$ (161.56)	-30%
Total	\$ 27,010	\$ 8,919	\$ (18,091)	-67%	\$ 15,238	\$ (11,772)	-44%

Statewide Email – Rate Proposal

4. Mobile Device

4.1. Brief Summary of Product

The Mobile Device service offering provides connectivity between the Statewide Email mailbox and wireless devices, providing the ability to send and receive messages instantly, open and review attachments, view your calendar or access contact information. Currently, the DTS supports Blackberry devices for customers. The provision of support for other devices is currently being evaluated.

4.2. Summary of proposed change

The current rate charged for the DTS Mobile Device product is \$2.38/User. This rate is only sufficient to cover the per user license costs for each device supported, leaving the staff, hardware and remaining software costs to be recovered through other rates.

In addition to the issue of aligning the rate with cost, the DTS also increased the cost of providing the service by approximately \$1 per user by adding a failover server to the environment. The DTS proposes to increase this rate to \$7.50/User to align the rate for this product with the cost to provide it. The volume of users has a profound effect on the rate for this product. As such, the DTS will reevaluate the assumptions as a clearer picture of 2007-08 growth materializes and make a mid-year proposal to reduce the rate, if warranted.

4.3. Summary of Analysis

4.3.1. Rationale for change

The primary rationale for this rate increase is the alignment of the rate with costs. Given the \$2.38/user rate currently charged is just sufficient to cover the per user license costs for each device supported, it was clear that the rate did not appropriately recover all the costs related to providing the service.

4.3.2. Business factors driving change

In addition to the issue of aligning the rate with cost, the DTS also increased the cost of providing the service by approximately \$1 per user by adding a failover server to the environment. The need to protect against hardware failure of the mobile device server was viewed as an essential component of this service offering.

4.3.3. Rate Setting Methodology Used

The Service Methodology was used for this Mobile Device rate proposal.

4.3.4. Analysis Detail

Volume of Billable Units

In order to estimate the volume of Mobile Devices that the DTS must project the number of total mailboxes expected to be supported and the percentage of those that will also require Mobile Device support. Utilization information for 2006-07 indicates that the DTS has seen the percentage of Mobile Devices to Mailboxes grow from 1.5 in July 2006 to 2.2 in March 2007. Although this growth trend may continue up to 4 to 5 percent before it levels off, the DTS will

Statewide Email – Rate Proposal

assume 2.5 percent for 2007-08 absent customer-specific information. In discussions with CDCR it was communicated that their Mobile Device utilization would be approximately 6 percent. In order to project the Volume of Billable Units for this service for 2007-08 the DTS applied the 6 percent figure to the assumed CDCR volume of mailboxes and the 2.5 percent figure to all other customer mailboxes that are projected for 2007-08 under the Middle Customer Adoption Assumption (see Section 2.5). Using this methodology the DTS estimates that it will sell 15,278 Mobile Device months in 2007-08.

Cost of Service

The Monthly Total Cost was estimated for each month in 2007-08 based on the number of Mobile Devices to be supported in that month. See Appendix D for a listing of the cost components and operational assumptions used in the monthly cost calculations. The cost projection for 2007-08 is \$114,990.

The table below displays the monthly volume and cost projections and the totals for 2007-08. The totals will be used in the Rate Calculation

2007-08 Volume and Cost Projection for Mobile Device						
	Mailbox Volume		Mobile Device Users		Total Mobile Users	Monthly Total Cost at Mobile Volume
	Others	CDCR	Others @ 2.5%	CDCR @ 6.0%		
Jul-07	15,400		385	-	385	\$ 4,128
Aug-07	17,700		443	-	443	\$ 4,439
Sep-07	20,000		500	-	500	\$ 4,749
Oct-07	20,400	5,000	510	300	810	\$ 6,351
Nov-07	20,800	10,000	520	600	1,120	\$ 7,954
Dec-07	21,200	15,000	530	900	1,430	\$ 10,998
Jan-08	21,600	20,000	540	1,200	1,740	\$ 12,599
Feb-08	22,000	20,000	550	1,200	1,750	\$ 12,651
Mar-08	22,400	20,000	560	1,200	1,760	\$ 12,703
Apr-08	22,800	20,000	570	1,200	1,770	\$ 12,754
May-08	23,200	20,000	580	1,200	1,780	\$ 12,806
Jun-08	23,600	20,000	590	1,200	1,790	\$ 12,858
Totals					15,278	\$ 114,990

Rate Calculation

Cost per Billable Unit for Mobile Device in 2007-08:

$$\frac{\text{2007-08 Total Cost of Service}}{\text{2007-08 Volume of Billable Units}} = \frac{\$114,990}{15,278 \text{ user months}} = \$7.52/\text{user month}$$

The DTS proposes a monthly Mobile Device rate of \$7.50 per user.

Statewide Email – Rate Proposal

4.4. Financial Impact

4.4.1. Impact on DTS Revenue and Expenses

Although the Mobile Device rate is increasing by nearly 200 percent, the impact on the overall DTS revenue and expenditure levels are minimal. As illustrated in the table below, if all other rates were held constant, the increase in annual revenue from this rate change would be \$21,677, which is just over .01 percent of the annual DTS revenue. However, all other rates are not being held constant. The majority of this rate increase is the result of aligning the rate with actual cost, which means that although revenue is increasing here, the revenue collected by other email-related rates can be decreased as a result. DTS costs did increase by about \$5,000 per year (\$20K for a server and software/4 year useful life) as a result of the implementation of a failover server for Mobile Devices. The rate calculation above considers this new cost. Thus, the net impact on DTS annual expenditures and revenues is an increase to both of approximately \$5,000.

4.4.2. Customer Impacts based on stated utilization estimate

The following customer impact analysis is based on a snapshot of utilization taken in March 2007. The Mobile Device service offering is available to not only the Statewide Email environment but also the customers that have yet to be upgraded from the Exchange 5.5 environment.

Customer	March 2007 Mailboxes	Customer Impact of Mobile Device Rate Change				
		March 2007 Users	Monthly Cost @ \$2.38	Monthly Cost @ \$7.50	Monthly Impact	Annual Impact
Alcoholic Beverage Control	489	11	\$ 26	\$ 83	\$ 56	\$ 676
California Bay-Delta Authority	99	20	\$ 48	\$ 150	\$ 102	\$ 1,229
California Workforce Investment Board	23	5	\$ 12	\$ 38	\$ 26	\$ 307
Department of Developmental Services	812	66	\$ 157	\$ 495	\$ 338	\$ 4,055
Department of Social Services	3,227	66	\$ 157	\$ 495	\$ 338	\$ 4,055
Office of Systems Integration	645	99	\$ 236	\$ 743	\$ 507	\$ 6,083
Office of Traffic Safety	41	18	\$ 43	\$ 135	\$ 92	\$ 1,106
Placer County Department of Child Support Services	63	-	\$ -	\$ -	\$ -	\$ -
State Council on Developmental Disabilities	137	17	\$ 40	\$ 128	\$ 87	\$ 1,044
Employment Development Department (Exchange 5.5)	8,713	89	\$ 212	\$ 668	\$ 456	\$ 5,468
CWS/CMS County Users - via OSI (Exchange 5.5)	4,102	0	\$ -	\$ -	\$ -	\$ -
Total	18,351	391	\$ 931	\$ 2,933	\$ 2,002	\$ 24,023

Statewide Email – Rate Proposal

5. Migration Services

The DTS can provide consulting services to perform migration assessments and services for customers currently running Microsoft Exchange, Groupwise or Lotus Notes systems. Migration costs are likely to vary significantly by customer due to the following factors:

- **Geography** – How dispersed the customer desktops are geographically
- **Source Email System** – Migrations from Lotus Notes, Groupwise and Exchange environments vary in complexity and cost.
- **Migration Approach** – There is a significant cost difference between migrating all data in a transparent manner by synchronizing the old and new mailboxes and performing a “clean cutover”, whereby the user receives a new mailbox and manually transfers needed information from the old mailbox.
- **Customer Resources** – The availability and level of expertise of customer messaging and desktop staff.

The DTS decided that it would not be appropriate to build migration costs into the base mailbox rate given the following factors:

1. The potential for large variances in per mailbox cost for migration
2. The DTS has current customers that do not require this service
3. Migration costs are a one-time expense

The DTS proposes to charge customers the actual cost of customer migrations, but allow for payment over a 24-month period in order to effectively allow customers to pay as if the cost was built into their mailbox rate.

Based on market research the DTS expects that consulting assistance for migration costs will be approximately \$25 per Exchange to Exchange mailbox migration and \$45 per non-Exchange to Exchange migration. In addition to this consulting cost, the customer will be charged to recover a proportional share of the DTS migration infrastructure cost, which is currently not expected to exceed \$5 per mailbox. In many cases, a migration license will be required. The average cost of migration licenses is \$12 per mailbox. However, these costs may be avoided depending on the migration approach employed. For example, a “clean” migration does not require a license because the new mailbox is populated only to the extent that the user forwards content to it from their old mailbox.

APPENDIX A: Statewide Email - Cost Components and Operational Assumptions For Base Mailbox Rate

COST COMPONENTS for BASE MAILBOX

Identification	Categorization				Quantity Driver		Price		Monthly Cost Calculations		
	Direct/ Indirect	Environment	Cost Categories	Cost Type	Qty	Driver	Unit Price	Unit Description	Life Expectancy (in months)	Monthly Costs	Monthly Cost for calcs
Consulting for Admin Tool and Temporary Exchange Support Augmentation	Direct	Production	Fixed	One-time	1	per basic service	\$ 295,000.00	per contract	60	\$ 4,916.67	4,916.67
Trend Micro Control Manager Server	Direct	Production	Fixed	Ongoing	1	per basic service	\$ 11,576.46	per server	48	\$ 241.18	241.18
Mailbox servers	Direct	Test	Fixed	Ongoing	5	per test environment	\$ 25,963.61	per server	48	\$ 540.91	540.91
ISA servers	Direct	Test	Fixed	Ongoing	2	per test environment	\$ 11,576.46	per server	48	\$ 241.18	241.18
Public Folder Server	Direct	Test	Fixed	Ongoing	1	per test environment	\$ 12,926.46	per server	48	\$ 269.30	269.30
OWA Web Servers	Direct	Test	Fixed	Ongoing	2	per test environment	\$ 24,613.61	per server	48	\$ 512.78	512.78
Bridgehead Servers	Direct	Test	Fixed	Ongoing	2	per test environment	\$ 24,613.61	per server	48	\$ 512.78	512.78
Global Catalog Server	Direct	Test	Fixed	Ongoing	7	per test environment	\$ 11,576.46	per server	48	\$ 241.18	241.18
SMTP servers w/ 2 HBA cards	Direct	Test	Fixed	Ongoing	4	per test environment	\$ 12,926.46	per server	48	\$ 269.30	269.30
ARS Servers	Direct	Production	Fixed	Ongoing	2	per basic service	\$ 11,576.46	per server	48	\$ 241.18	241.18
ARS Servers	Direct	Test	Fixed	Ongoing	1	per test environment	\$ 11,576.46	per server	48	\$ 241.18	241.18
EUQ Servers	Direct	Production	Fixed	Ongoing	2	per basic service	\$ 11,576.46	per server	48	\$ 241.18	241.18
MessageStat servers	Direct	Production	Fixed	Ongoing	1	per basic service	\$ 11,576.46	per server	48	\$ 241.18	241.18
MessageStat servers	Direct	Test	Fixed	Ongoing	1	per test environment	\$ 11,576.46	per server	48	\$ 241.18	241.18
SQL Database Servers	Direct	Test	Fixed	Ongoing	2	per test environment	\$ 11,344.00	per server	48	\$ 236.33	236.33
SQL Database Servers	Direct	Production	Fixed	Ongoing	2	per basic service	\$ 11,344.00	per server	48	\$ 236.33	236.33
Standard Windows Server Software	Direct	Shared	Fixed	One-time	1	per server	\$ 7,874.37	per server	48	\$ 164.05	164.05
SQL Enterprise Database Software licenses	Direct	Shared	Fixed	One-time	1	per SQL server	\$ 5,060.00	per license	48	\$ 105.42	70.54
SQL Enterprise Database Software maintenance	Direct	Shared	Fixed	Ongoing	1	per SQL license	\$ 1674.00	per license	12	\$ 139.50	139.50
Exchange Software	Direct	Production	Fixed	One-time	1	per mailbox, OWA, bridgehead, public store server	\$ 2,583.00	per server	48	\$ 53.81	53.81
Exchange Software -Software Assurance	Direct	Production	Fixed	Ongoing	1	per Exchange SW license	\$ 1,292.00	per license	36	\$ 35.89	35.89
Web Certificates	Direct	Production	Fixed	One-time	1	per fixed webserver (EUQ, ARS, Messagestats, OWA)	\$ 450.00	per server	48	\$ 9.38	4.69
Web certificate maintenance	Direct	Production	Fixed	Ongoing	1	per fixed webserver (EUQ, ARS, Messagestats, OWA)	\$ 225.00	per license	12	\$ 18.75	18.75
Trend Micro Gold Premium Support Maintenance	Direct	Production	Fixed	Ongoing	1	per trend micro server	\$ 40,076.00	per server	12	\$ 3,339.67	3,339.67
Staff Salaries and Benefits	Direct	Production	Fixed	Ongoing	7.2	per basic service	\$ 97,460.00	per position	12	\$ 8,121.67	8,121.67
Staff training	Direct	Production	Fixed	Ongoing	1	per staff	\$ 5,000.00	per position	12	\$ 416.67	416.67
Misc Expenses	Direct	Production	Fixed	Ongoing	1	per basic service	\$ 5,000.00	per service	12	\$ 416.67	416.67
Microsoft Premier Support	Direct	Production	Fixed	Ongoing	1	per basic service	\$ 184,000.00	share of contract	24	\$ 7,666.67	7,666.67
Staff Salaries and Benefits	Direct	Production	Variable	Ongoing	1	per variable staffing assumptions	\$ 97,460.00	per position	12	\$ 8,121.67	8,121.67
Staff training	Direct	Production	Variable	Ongoing	1	per staff	\$ 5,000.00	per position	12	\$ 416.67	416.67
Web Certificates	Direct	Production	Variable	One-time	1	per variable webserver (OWA)	\$ 450.00	per server	48	\$ 9.38	4.69
SMTP servers w/ 2 HBA cards	Direct	Production	Variable	Ongoing	1	per capacity assumption	\$ 11,966.00	per server	48	\$ 249.29	249.29
Mailbox servers	Direct	Production	Variable	Ongoing	1	per capacity assumption	\$ 25,963.61	per server	48	\$ 540.91	540.91
OWA Web Servers	Direct	Production	Variable	Ongoing	1	per capacity assumption	\$ 24,613.61	per server	48	\$ 512.78	512.78
ISA servers	Direct	Production	Variable	Ongoing	1	per capacity assumption	\$ 11,576.46	per server	48	\$ 241.18	241.18
Bridgehead Servers	Direct	Production	Variable	Ongoing	1	per capacity assumption	\$ 24,613.61	per server	48	\$ 512.78	512.78
Global Catalog Server	Direct	Production	Variable	Ongoing	1	per active mailbox server	\$ 11,576.46	per server	48	\$ 241.18	241.18
Control Manager Enterprise licenses	Direct	Production	Variable	One-time	1	per mailbox	\$ 0.65	per license	48	\$ 0.01	0.01
Control Manager Enterprise maintenance	Direct	Production	Variable	Ongoing	1	per mailbox	\$ 0.22	per license	48	\$ 0.00	0.00
Spam Prevention Solution	Direct	Production	Variable	One-time	1	per mailbox	\$ 1.80	per license	48	\$ 0.04	0.01
IMSS licenses	Direct	Production	Variable	One-time	1	per mailbox	\$ 3.20	per license	48	\$ 0.07	0.05
Scanmail Exchange Suite licenses	Direct	Production	Variable	One-time	1	per mailbox	\$ 3.75	per license	48	\$ 0.08	0.05
Exchange Software	Direct	Production	Variable	One-time	1	per mailbox, OWA, bridgehead, public store server	\$ 2,583.00	per server	48	\$ 53.81	53.81
Exchange Software -Software Assurance	Direct	Production	Variable	Ongoing	1	per Exchange SW license	\$ 1,292.00	per license	36	\$ 35.89	35.89
Standard Windows Server Software	Direct	Production	Variable	One-time	1	per server	\$ 7,874.37	per server	48	\$ 164.05	164.05
IMSS maintenance	Direct	Production	Variable	Ongoing	1	per mailbox	\$ 0.92	per license	12	\$ 0.08	0.08
SPAM Prevention Solution Maintenance	Direct	Production	Variable	Ongoing	1	per mailbox	\$ 0.73	per license	12	\$ 0.06	0.06
Scanmail Exchange Suite Maintenance	Direct	Production	Variable	Ongoing	1	per mailbox	\$ 1.27	per license	12	\$ 0.11	0.11
MessageStat licenses	Direct	Production	Variable	One-time	1	per mailbox	\$ 5.69	per license	48	\$ 0.12	0.09
MessageStat maintenance	Direct	Production	Variable	Ongoing	1	per mailbox	\$ 1.14	per license	12	\$ 0.10	0.10
Web certificate maintenance	Direct	Production	Variable	Ongoing	1	per variable webserver (OWA)	\$ 225.00	per license	12	\$ 18.75	18.75
Public Folder Servers	Direct	Production	Variable	Ongoing	1	per capacity assumption	\$ 12,926.46	per server	48	\$ 269.30	269.30
Facilities/PC-LAN	Indirect		Variable	Ongoing	1	Personnel Years (Pys)	\$ 1,405.92	per PY	1	\$ 1,405.92	1,405.92
Help Desk/Change Mgt./Network	Indirect		Variable	Ongoing	1	Server	\$ 12.86	per server	1	\$ 12.86	12.86
Security	Indirect		Variable	Ongoing		%of total expenses of CC requiring security					
Administrative Overhead (Admin, CDD, PPD)	Indirect		Variable	Ongoing		%of total expenses					

APPENDIX A: Statewide Email - Cost Components and Operational Assumptions For Base Mailbox Rate

OPERATIONAL ASSUMPTIONS for BASE MAILBOX

Clustering Assumptions

Mailbox Servers per Cluster	8
Active Mailbox Servers per Cluster	6
Blackberry Servers per Cluster	2
Active Blackberry Servers per Cluster	1
Global Catalog Servers	6
Mailboxes per Cluster	30,000

The mailbox cluster is the 8 mailbox servers, the Blackberry and Global Catalog servers are not part of the cluster but are shown here because they are anticipated to be added per cluster.

This indicates the mailbox volume level the DTS expects each cluster to be able to serve. It is calculated as follows:

$$\text{Active Mailbox Servers per Cluster} \times \text{Mailboxes per Active Mailbox Server}$$

$$6 \times 5,000 = 30,000$$

Server Capacity Assumptions

Mailboxes per SMTP Server	12,000
Mailboxes per Active Mailbox Server	5,000
Mailboxes per OWA Server	12,000
Mailboxes per ISA Server	12,000
Mailboxes per Bridgehead Server	12,000
Mailboxes per Public Folder Server	50,000

These are the assumptions of mailbox capacity for each server based function.

Minimum staffing level required to provide sufficient coverage and breadth and depth of expertise. Weighted Average staff salary at 3/4 step and 5% salary increase assumption

Staffing Assumptions

Minimum Messaging staff required	7
Variable Messaging staff driver (mailboxes)	25,000
Variable Blackberry staff driver (BB users)	5,000
Server Support Staff driver- servers per staff	25
SQL Database Support driver - servers per staff	20
Salary and Benefits per staff	\$ 97,460

Staffing/cost allocation drivers for messaging, blackberry, windows server and SQL database server support.

Weighted Average staff salary and benefits at 3/4 step with 5% salary increase assumption for estimated July 2006 and 2007 increases. Approximately mid-step SSS II.

Shared Windows Server Support Assumptions

Microsoft Premier Support Contract Cost	\$ 920,000
Exchange Share of MS Premier Support	20%

Price and cost allocation assumption for the Exchange share of Microsoft Premier Support which is a support contract shared across many services.

APPENDIX B: Statewide Email - Cost Components Detail at Volume

STATEWIDE EMAIL - Cost Component Detail									
Base Mailbox at 30,000 mailboxes									
	Line Item	Cost Component	Quantity	FIXED COST	VARIABLE COST	TOTAL COST	% of Total	Cost per Mailbox	
Direct	Personal Services	Staff Salaries and Benefits	7.2	\$ 58,476.00		\$ 58,476.00	25.19%	\$ 1.95	
			3.8		\$ 31,024.77	\$ 31,024.77	13.36%	\$ 1.03	
	Personal Services Total			\$ 58,476.00	\$ 31,024.77	\$ 89,500.77	38.55%	\$ 2.98	
	Software Maintenance	Exchange Software -Software Assurance	10	\$ 358.89		\$ 358.89	0.15%	\$ 0.01	
			15		\$ 538.33	\$ 538.33	0.23%	\$ 0.02	
		IMSS maintenance	30,000		\$ 2,300.00	\$ 2,300.00	0.99%	\$ 0.08	
		MessageStat maintenance	30,000		\$ 2,850.00	\$ 2,850.00	1.23%	\$ 0.10	
		Scanmail Exchange Suite Maintenance	30,000		\$ 3,175.00	\$ 3,175.00	1.37%	\$ 0.11	
		SPAM Prevention Solution Maintenance	30,000		\$ 1,825.00	\$ 1,825.00	0.79%	\$ 0.06	
		SQL Enterprise Database Software maintenance	4	\$ 558.00		\$ 558.00	0.24%	\$ 0.02	
		Trend Micro Gold Premium Support Maintenance	1	\$ 3,339.67		\$ 3,339.67	1.44%	\$ 0.11	
		Web certificate maintenance	3		\$ 56.25	\$ 56.25	0.02%	\$ 0.00	
			8	\$ 150.00		\$ 150.00	0.06%	\$ 0.01	
		Microsoft Premier Support	1	\$ 7,666.67		\$ 7,666.67	3.30%	\$ 0.26	
	Software Maintenance Total			\$ 12,073.22	\$ 10,744.58	\$ 22,817.81	9.83%	\$ 0.76	
	Hardware Purchase	ARS Servers		1	\$ 241.18		\$ 241.18	0.10%	\$ 0.01
				2	\$ 482.35		\$ 482.35	0.21%	\$ 0.02
		Bridgehead Servers		2	\$ 1,025.57		\$ 1,025.57	0.44%	\$ 0.03
				3		\$ 1,538.35	\$ 1,538.35	0.66%	\$ 0.05
		ELQ Servers		2	\$ 482.35		\$ 482.35	0.21%	\$ 0.02
		Global Catalog Server		6		\$ 1,447.06	\$ 1,447.06	0.62%	\$ 0.05
				7	\$ 1,688.23		\$ 1,688.23	0.73%	\$ 0.06
		ISA servers		2	\$ 482.35		\$ 482.35	0.21%	\$ 0.02
				3		\$ 723.53	\$ 723.53	0.31%	\$ 0.02
		Mailbox servers		5	\$ 2,704.54		\$ 2,704.54	1.16%	\$ 0.09
				8		\$ 4,327.27	\$ 4,327.27	1.86%	\$ 0.14
		MessageStat servers		1	\$ 241.18		\$ 241.18	0.10%	\$ 0.01
					\$ 241.18		\$ 241.18	0.10%	\$ 0.01
		OWA Web Servers		2	\$ 1,025.57		\$ 1,025.57	0.44%	\$ 0.03
				3		\$ 1,538.35	\$ 1,538.35	0.66%	\$ 0.05
		Public Folder Server		1	\$ 269.30		\$ 269.30	0.12%	\$ 0.01
		Public Folder Servers		1		\$ 269.30	\$ 269.30	0.12%	\$ 0.01
		SMTP servers w/ 2 HBA cards		3		\$ 747.88	\$ 747.88	0.32%	\$ 0.02
				4	\$ 1,077.21		\$ 1,077.21	0.46%	\$ 0.04
		SQL Database Servers		2	\$ 472.67		\$ 472.67	0.20%	\$ 0.02
					\$ 472.67		\$ 472.67	0.20%	\$ 0.02
		Trend Micro Control Manager Server		1	\$ 241.18		\$ 241.18	0.10%	\$ 0.01
	Hardware Purchase Total				\$ 11,147.51	\$ 10,591.73	\$ 21,739.24	9.36%	\$ 0.72
	Software Purchase	Control Manager Enterprise licenses		30,000		\$ 268.75	\$ 268.75	0.12%	\$ 0.01
		Control Manager Enterprise maintenance		30,000		\$ 137.50	\$ 137.50	0.06%	\$ 0.00
		Exchange Software		10	\$ 538.13		\$ 538.13	0.23%	\$ 0.02
				15		\$ 807.19	\$ 807.19	0.35%	\$ 0.03
		IMSS licenses		30,000		\$ 1,425.00	\$ 1,425.00	0.61%	\$ 0.05
		MessageStat licenses		30,000		\$ 2,843.75	\$ 2,843.75	1.22%	\$ 0.09
		Scanmail Exchange Suite licenses		30,000		\$ 1,550.00	\$ 1,550.00	0.67%	\$ 0.05
		Spam Prevention Solution		30,000		\$ 331.25	\$ 331.25	0.14%	\$ 0.01
		SQL Enterprise Database Software licenses		4	\$ 282.17		\$ 282.17	0.12%	\$ 0.01
		Web Certificates		3		\$ 14.06	\$ 14.06	0.01%	\$ 0.00
				8	\$ 37.50		\$ 37.50	0.02%	\$ 0.00
		Standard Windows Server Software		27		\$ 4,429.33	\$ 4,429.33	1.91%	\$ 0.15
				35	\$ 5,741.73		\$ 5,741.73	2.47%	\$ 0.19
	Software Purchase Total				\$ 6,599.52	\$ 11,806.83	\$ 18,406.35	7.93%	\$ 0.61
	Consulting Services	Consulting for Admin Tool and Temporary Exchange		1	\$ 4,916.67		\$ 4,916.67	2.12%	\$ 0.16
	Consulting Services Total				\$ 4,916.67		\$ 4,916.67	2.12%	\$ 0.16
	Training	Staff training		7.2	\$ 3,000.00		\$ 3,000.00	1.29%	\$ 0.10
				3.8		\$ 1,591.67	\$ 1,591.67	0.69%	\$ 0.05
	Training Total				\$ 3,000.00	\$ 1,591.67	\$ 4,591.67	1.98%	\$ 0.15
	Other OE&E	Misc Expenses		1	\$ 416.67		\$ 416.67	0.18%	\$ 0.01
	Other OE&E Total				\$ 416.67		\$ 416.67	0.18%	\$ 0.01
Direct Total				\$ 96,629.59	\$ 65,759.58	\$ 162,389.17	69.95%	\$ 5.41	
Indirect	Transfer	Administrative Overhead (Admin, CDD, PPD)			\$ 42,555.84	\$ 42,555.84	18.33%	\$ 1.42	
		Facilities/PC-LAN			\$ 15,212.07	\$ 15,212.07	6.55%	\$ 0.51	
		Help Desk/Change Mgt./Network			\$ 6,997.48	\$ 6,997.48	3.01%	\$ 0.23	
		Security			\$ 4,998.24	\$ 4,998.24	2.15%	\$ 0.17	
	Transfer Total					\$ 69,763.64	\$ 69,763.64	30.05%	\$ 2.33
Indirect Total					\$ 69,763.64	\$ 69,763.64	30.05%	\$ 2.33	
Grand Total				\$ 96,629.59	\$ 135,523.22	\$ 232,152.81	100.00%	\$ 7.74	

APPENDIX B: Statewide Email - Cost Components Detail at Volume

STATEWIDE EMAIL - Cost Component Detail								
Base Mailbox at 50,000 mailboxes								
	Line Item	Cost Component	Quantity	FIXED COST	VARIABLE COST	TOTAL COST	% of Total	Cost per Mailbox
Direct	Personal Services	Staff Salaries and Benefits	4.7		\$ 38,171.83	\$ 38,171.83	13.78%	\$ 0.76
			7.2	\$ 58,476.00		\$ 58,476.00	21.12%	\$ 1.17
	Personal Services Total			\$ 58,476.00	\$ 38,171.83	\$ 96,647.83	34.90%	\$ 1.93
	Hardware Purchase	ARS Servers	2	\$ 482.35		\$ 482.35	0.17%	\$ 0.01
			1	\$ 241.18		\$ 241.18	0.09%	\$ 0.00
		Bridgehead Servers	5		\$ 2,563.92	\$ 2,563.92	0.93%	\$ 0.05
			2	\$ 1,025.57		\$ 1,025.57	0.37%	\$ 0.02
		EUQ Servers	2	\$ 482.35		\$ 482.35	0.17%	\$ 0.01
		Global Catalog Server	12		\$ 2,894.12	\$ 2,894.12	1.05%	\$ 0.06
			7	\$ 1,688.23		\$ 1,688.23	0.61%	\$ 0.03
		ISA servers	5		\$ 1,205.88	\$ 1,205.88	0.44%	\$ 0.02
			2	\$ 482.35		\$ 482.35	0.17%	\$ 0.01
		Mailbox servers	16		\$ 8,654.54	\$ 8,654.54	3.13%	\$ 0.17
			5	\$ 2,704.54		\$ 2,704.54	0.98%	\$ 0.05
		MessageStat servers	1	\$ 241.18		\$ 241.18	0.09%	\$ 0.00
			1	\$ 241.18		\$ 241.18	0.09%	\$ 0.00
		OWA Web Servers	5		\$ 2,563.92	\$ 2,563.92	0.93%	\$ 0.05
			2	\$ 1,025.57		\$ 1,025.57	0.37%	\$ 0.02
		Public Folder Server	1	\$ 269.30		\$ 269.30	0.10%	\$ 0.01
		Public Folder Servers	1		\$ 269.30	\$ 269.30	0.10%	\$ 0.01
		SMTP servers w/ 2 HBA cards	5		\$ 1,246.46	\$ 1,246.46	0.45%	\$ 0.02
			4	\$ 1,077.21		\$ 1,077.21	0.39%	\$ 0.02
		SQL Database Servers	2	\$ 472.67		\$ 472.67	0.17%	\$ 0.01
			2	\$ 472.67		\$ 472.67	0.17%	\$ 0.01
		Trend Micro Control Manager Server	1	\$ 241.18		\$ 241.18	0.09%	\$ 0.00
	Hardware Purchase Total			\$ 11,147.51	\$ 19,398.13	\$ 30,545.64	11.03%	\$ 0.61
	Software Maintenance	Exchange Software -Software Assurance	10	\$ 358.89		\$ 358.89	0.13%	\$ 0.01
			27		\$ 969.00	\$ 969.00	0.35%	\$ 0.02
		IMSS maintenance	50,000		\$ 3,833.33	\$ 3,833.33	1.38%	\$ 0.08
		MessageStat maintenance	50,000		\$ 4,750.00	\$ 4,750.00	1.72%	\$ 0.10
		Scanmail Exchange Suite Maintenance	50,000		\$ 5,291.67	\$ 5,291.67	1.91%	\$ 0.11
		SPAM Prevention Solution Maintenance	50,000		\$ 3,041.67	\$ 3,041.67	1.10%	\$ 0.06
		SQL Enterprise Database Software maintenance	4	\$ 558.00		\$ 558.00	0.20%	\$ 0.01
		Trend Micro Gold Premium Support Maintenance	1	\$ 3,339.67		\$ 3,339.67	1.21%	\$ 0.07
		Web certificate maintenance	5		\$ 93.75	\$ 93.75	0.03%	\$ 0.00
			9	\$ 168.75		\$ 168.75	0.06%	\$ 0.00
		Microsoft Premier Support	1	\$ 7,666.67		\$ 7,666.67	2.77%	\$ 0.15
	Software Maintenance Total			\$ 12,091.97	\$ 17,979.42	\$ 30,071.39	10.86%	\$ 0.60
	Software Purchase	Control Manager Enterprise licenses	50,000		\$ 447.92	\$ 447.92	0.16%	\$ 0.01
		Control Manager Enterprise maintenance	50,000		\$ 229.17	\$ 229.17	0.08%	\$ 0.00
		Exchange Software	10	\$ 538.13		\$ 538.13	0.19%	\$ 0.01
			27		\$ 1,452.94	\$ 1,452.94	0.52%	\$ 0.03
		IMSS licenses	50,000		\$ 2,375.00	\$ 2,375.00	0.86%	\$ 0.05
		MessageStat licenses	50,000		\$ 4,739.58	\$ 4,739.58	1.71%	\$ 0.09
		Scanmail Exchange Suite licenses	50,000		\$ 2,583.33	\$ 2,583.33	0.93%	\$ 0.05
		Spam Prevention Solution	50,000		\$ 552.08	\$ 552.08	0.20%	\$ 0.01
		SQL Enterprise Database Software licenses	4	\$ 282.17		\$ 282.17	0.10%	\$ 0.01
		Web Certificates	5		\$ 23.44	\$ 23.44	0.01%	\$ 0.00
			9	\$ 42.19		\$ 42.19	0.02%	\$ 0.00
		Standard Windows Server Software	49		\$ 8,038.42	\$ 8,038.42	2.90%	\$ 0.16
			35	\$ 5,741.73		\$ 5,741.73	2.07%	\$ 0.11
	Software Purchase Total			\$ 6,604.21	\$ 20,441.88	\$ 27,046.09	9.77%	\$ 0.54
	Training	Staff training	4.7		\$ 1,958.33	\$ 1,958.33	0.71%	\$ 0.04
			7.2	\$ 3,000.00		\$ 3,000.00	1.08%	\$ 0.06
	Training Total			\$ 3,000.00	\$ 1,958.33	\$ 4,958.33	1.79%	\$ 0.10
	Consulting Services	Consulting for Admin Tool and Temporary Exchange Support Augmentation	1	\$ 4,916.67		\$ 4,916.67	1.78%	\$ 0.10
	Consulting Services Total			\$ 4,916.67		\$ 4,916.67	1.78%	\$ 0.10
	Other OE&E	Misc Expenses	1	\$ 416.67		\$ 416.67	0.15%	\$ 0.01
	Other OE&E Total			\$ 416.67		\$ 416.67	0.15%	\$ 0.01
Direct Total			\$ 96,653.03	\$ 97,949.59	\$ 194,602.61	70.27%	\$ 3.89	
Indirect	Transfer	Administrative Overhead (Admin, CDD, PPD)			\$ 50,456.72	\$ 50,456.72	18.22%	\$ 1.01
		Facilities/PC-LAN			\$ 16,449.28	\$ 16,449.28	5.94%	\$ 0.33
		Help Desk/Change Mgt./Network			\$ 9,480.46	\$ 9,480.46	3.42%	\$ 0.19
		Security			\$ 5,949.69	\$ 5,949.69	2.15%	\$ 0.12
	Transfer Total				\$ 82,336.15	\$ 82,336.15	29.73%	\$ 1.65
Indirect Total				\$ 82,336.15	\$ 82,336.15	29.73%	\$ 1.65	
Grand Total			\$ 96,653.03	\$ 180,285.74	\$ 276,938.77	100.00%	\$ 5.54	

APPENDIX B: Statewide Email - Cost Components Detail at Volume

STATEWIDE EMAIL - Cost Component Detail								
Base Mailbox at 94,000 mailboxes								
	Line Item	Cost Component	Quantity	FIXED COST	VARIABLE COST	TOTAL COST	% of Total	Cost per Mailbox
Direct	Personal Services	Staff Salaries and Benefits	7.2	\$ 58,476.00		\$ 58,476.00	15.47%	\$ 0.62
			7.4		\$ 60,392.71	\$ 60,392.71	15.97%	\$ 0.64
	Personal Services Total			\$ 58,476.00	\$ 60,392.71	\$ 118,868.71	31.44%	\$ 1.26
	Hardware Purchase	ARS Servers	2	\$ 482.35		\$ 482.35	0.13%	\$ 0.01
			1	\$ 241.18		\$ 241.18	0.06%	\$ 0.00
		Bridgehead Servers	8		\$ 4,102.27	\$ 4,102.27	1.09%	\$ 0.04
			2	\$ 1,025.57		\$ 1,025.57	0.27%	\$ 0.01
		EUQ Servers	2	\$ 482.35		\$ 482.35	0.13%	\$ 0.01
		Global Catalog Server	24		\$ 5,788.23	\$ 5,788.23	1.53%	\$ 0.06
			7	\$ 1,688.23		\$ 1,688.23	0.45%	\$ 0.02
		ISA servers	8		\$ 1,929.41	\$ 1,929.41	0.51%	\$ 0.02
			2	\$ 482.35		\$ 482.35	0.13%	\$ 0.01
		Mailbox servers	32		\$ 17,309.07	\$ 17,309.07	4.58%	\$ 0.18
			5	\$ 2,704.54		\$ 2,704.54	0.72%	\$ 0.03
		MessageStat servers	1	\$ 241.18		\$ 241.18	0.06%	\$ 0.00
			1	\$ 241.18		\$ 241.18	0.06%	\$ 0.00
		OWA Web Servers	8		\$ 4,102.27	\$ 4,102.27	1.09%	\$ 0.04
			2	\$ 1,025.57		\$ 1,025.57	0.27%	\$ 0.01
		Public Folder Server	1	\$ 269.30		\$ 269.30	0.07%	\$ 0.00
		Public Folder Servers	2		\$ 538.60	\$ 538.60	0.14%	\$ 0.01
		SMTP servers w/ 2 HBA cards	8		\$ 1,994.33	\$ 1,994.33	0.53%	\$ 0.02
			4	\$ 1,077.21		\$ 1,077.21	0.28%	\$ 0.01
		SQL Database Servers	2	\$ 472.67		\$ 472.67	0.13%	\$ 0.01
			2	\$ 472.67		\$ 472.67	0.13%	\$ 0.01
		Trend Micro Control Manager Server	1	\$ 241.18		\$ 241.18	0.06%	\$ 0.00
	Hardware Purchase Total			\$ 11,147.51	\$ 35,764.19	\$ 46,911.70	12.41%	\$ 0.50
	Software Maintenance	Exchange Software -Software Assurance	10	\$ 358.89		\$ 358.89	0.09%	\$ 0.00
			50		\$ 1,794.44	\$ 1,794.44	0.47%	\$ 0.02
		IMSS maintenance	94,000		\$ 7,206.67	\$ 7,206.67	1.91%	\$ 0.08
		MessageStat maintenance	94,000		\$ 8,930.00	\$ 8,930.00	2.36%	\$ 0.10
		Scanmail Exchange Suite Maintenance	94,000		\$ 9,948.33	\$ 9,948.33	2.63%	\$ 0.11
		SPAM Prevention Solution Maintenance	94,000		\$ 5,718.33	\$ 5,718.33	1.51%	\$ 0.06
		SQL Enterprise Database Software maintenance	4	\$ 558.00		\$ 558.00	0.15%	\$ 0.01
		Trend Micro Gold Premium Support Maintenance	1	\$ 3,339.67		\$ 3,339.67	0.88%	\$ 0.04
		Web certificate maintenance	8	\$ 150.00	\$ 150.00	\$ 300.00	0.08%	\$ 0.00
		Microsoft Premier Support	1	\$ 7,666.67		\$ 7,666.67	2.03%	\$ 0.08
	Software Maintenance Total			\$ 12,073.22	\$ 33,747.78	\$ 45,821.00	12.12%	\$ 0.49
	Software Purchase	Control Manager Enterprise licenses	94,000		\$ 842.08	\$ 842.08	0.22%	\$ 0.01
		Control Manager Enterprise maintenance	94,000		\$ 430.83	\$ 430.83	0.11%	\$ 0.00
		Exchange Software	10	\$ 538.13		\$ 538.13	0.14%	\$ 0.01
			50		\$ 2,690.63	\$ 2,690.63	0.71%	\$ 0.03
		IMSS licenses	94,000		\$ 4,465.00	\$ 4,465.00	1.18%	\$ 0.05
		MessageStat licenses	94,000		\$ 8,910.42	\$ 8,910.42	2.36%	\$ 0.09
		Scanmail Exchange Suite licenses	94,000		\$ 4,856.67	\$ 4,856.67	1.28%	\$ 0.05
		Spam Prevention Solution	94,000		\$ 1,037.92	\$ 1,037.92	0.27%	\$ 0.01
		SQL Enterprise Database Software licenses	4	\$ 282.17		\$ 282.17	0.07%	\$ 0.00
		Web Certificates	8	\$ 37.50	\$ 37.50	\$ 75.00	0.02%	\$ 0.00
		Standard Windows Server Software	90		\$ 14,764.44	\$ 14,764.44	3.91%	\$ 0.16
			35	\$ 5,741.73		\$ 5,741.73	1.52%	\$ 0.06
	Software Purchase Total			\$ 6,599.52	\$ 38,035.49	\$ 44,635.01	11.81%	\$ 0.47
	Training	Staff training	7.2	\$ 3,000.00		\$ 3,000.00	0.79%	\$ 0.03
			7.4		\$ 3,098.33	\$ 3,098.33	0.82%	\$ 0.03
	Training Total			\$ 3,000.00	\$ 3,098.33	\$ 6,098.33	1.61%	\$ 0.06
	Consulting Services	Consulting for Admin Tool and Temporary Exchange Support Augmentation	1	\$ 4,916.67		\$ 4,916.67	1.30%	\$ 0.05
	Consulting Services Total			\$ 4,916.67		\$ 4,916.67	1.30%	\$ 0.05
	Other OE&E	Misc Expenses	1	\$ 416.67		\$ 416.67	0.11%	\$ 0.00
	Other OE&E Total			\$ 416.67		\$ 416.67	0.11%	\$ 0.00
Direct Total				\$ 96,629.59	\$ 171,038.50	\$ 267,668.08	70.80%	\$ 2.85
Indirect	Transfer	Administrative Overhead (Admin, CDD, PPD)			\$ 67,946.64	\$ 67,946.64	17.97%	\$ 0.72
		Facilities/PC-LAN			\$ 20,295.89	\$ 20,295.89	5.37%	\$ 0.22
		Help Desk/Change Mgt./Network			\$ 14,107.82	\$ 14,107.82	3.73%	\$ 0.15
		Security			\$ 8,061.28	\$ 8,061.28	2.13%	\$ 0.09
	Transfer Total				\$ 110,411.63	\$ 110,411.63	29.20%	\$ 1.17
Indirect Total					\$ 110,411.63	\$ 110,411.63	29.20%	\$ 1.17
Grand Total				\$ 96,629.59	\$ 281,450.12	\$ 378,079.71	100.00%	\$ 4.02

APPENDIX C: Statewide Email – Rate and Volume Scenario Analysis

Rate indicated by Cost Recovery Objective

The following table² displays cost recovery statistics at each of the standard breakeven points assuming the middle Customer Adoption Assumption and the rate of \$5.54 per mailbox as indicated by the Cost Recovery Objective (see section 2.10 Proposed Rate for explanation of why this rate was not selected):

Break Even Analysis given Volume and Rate Assumptions						
Customer Adoption Assumption:		Middle				
Rate Assumption:		\$ 5.54 /mailbox/month				
Break Even Points	Volume	Period (months)	Cost Recovery Status at Break Even Point			
			Cumulative Direct Cost		Cumulative Total Cost	
			over/under	% Of Cost	over/under	% Of Cost
Direct Cost - Monthly	32,500	11	\$ (784,977)	-49.1%	\$ (1,486,514)	-64.6%
Total Cost - Monthly	50,000	39	\$ 1,026,898	14.7%	\$ (1,967,031)	-19.7%
Direct Cost - Cumulative		26	\$ 11,832	0.3%	\$ (1,895,315)	-29.9%
Total Cost - Cumulative		84	\$ 6,894,405	40.4%	\$ (336,674)	-1.4%
Total for Transition Period	1,190,550	34	\$ 622,343	10.4%	\$ (1,938,649)	-22.7%

This analysis indicates that at this rate and Customer Adoption Assumption, the DTS would under-recover the Total Costs of the Base Mailbox approximately \$1.9 million and recover approximately \$600 thousand more than the Direct Costs over the 34 month period.

² The table shows for each break even point:

- Volume at which the point is achieved (only applicable to monthly break even points)
- Number of months for the break even point to be achieved
- The status of the Cumulative Direct Cost recovery at the break even point in dollars (Cumulative Revenue - Cumulative Direct Cost from the beginning of the transition period to the month indicated as the break even period) and as a percentage of Cumulative Direct Cost.
- The status of the Cumulative Total Cost recovery at the break even point in dollars (Cumulative Revenue - Cumulative Total Cost from the beginning of the transition period to the month indicated as the break even period) and as a percentage of Cumulative Total Cost.

APPENDIX C: Statewide Email – Rate and Volume Scenario Analysis

Scenario 1

This scenario³ assumes the low Customer Adoption Assumption and the rate of \$5.54 per mailbox as indicated by the Cost Recovery Objective:

Break Even Analysis given Volume and Rate Assumptions						
Customer Adoption Assumption:		Low				
Rate Assumption:		\$ 5.54		/mailbox/month		
Break Even Points	Volume	Period (months)	Cost Recovery Status at Break Even Point			
			Cumulative Direct Cost		Cumulative Total Cost	
			over/under	% Of Cost	over/under	% Of Cost
Direct Cost - Monthly	32,500	47	\$ (1,195,105)	-16.0%	\$ (4,422,087)	-41.4%
Total Cost - Monthly	50,000	Over 84	\$ (546,398)	-3.8%	\$ (6,698,417)	-32.8%
Direct Cost - Cumulative		Over 84	\$ (546,398)	-3.8%	\$ (6,698,417)	-32.8%
Total Cost - Cumulative		Over 84	\$ (546,398)	-3.8%	\$ (6,698,417)	-32.8%
Total for Transition Period	720,550	34	\$ (1,129,081)	-22.0%	\$ (3,351,492)	-45.6%
Analysis of Rate Realignment at end of Transition Period						
Volume at end of period						30,000
Rate required at end of transition period (Total Cost - Monthly)					\$	7.74
Rate Change Required					\$	2.20
Percent Change						40%
Annualized Customer Impact of Rate Change					\$	792,000

Note: Information on the last three break even points indicates the cost recovery status at the 84 month point because the break even points fall outside of the 84 month analysis window.

This scenario analysis indicates that at this rate and Customer Adoption Assumption, the DTS would under-recover the Total Costs of the Base Mailbox approximately \$3.3 million and under-recover the Direct Costs by approximately \$1.1 million over the 34 month period.

Further, the DTS would need to increase the rate by 40% to \$7.74 at the end of the period resulting in an increased annual cost to the existing customers at that time of approximately \$800 thousand.

³ The Scenario analyses include additional information that illustrates the impact of the requirement to align the rate with actual cost at the end of the transition period.

APPENDIX C: Statewide Email – Rate and Volume Scenario Analysis

Scenario 2

This scenario assumes the middle Customer Adoption Assumption and a rate of \$6.00 per mailbox:

Break Even Analysis given Volume and Rate Assumptions						
Customer Adoption Assumption:	Middle					
Rate Assumption:	\$ 6.00 /mailbox/month					
Break Even Points	Volume	Period (months)	Cost Recovery Status at Break Even Point			
			Cumulative Direct Cost		Cumulative Total Cost	
			over/under	% Of Cost	over/under	% Of Cost
Direct Cost - Monthly	26,750	11	\$ (717,472)	-44.9%	\$ (1,419,009)	-61.7%
Total Cost - Monthly	45,000	22	\$ 32,816	0.9%	\$ (1,551,348)	-29.5%
Direct Cost - Cumulative		22	\$ 32,816	0.9%	\$ (1,551,348)	-29.5%
Total Cost - Cumulative		66	\$ 5,467,583	42.5%	\$ 3,156	0.0%
Total for Transition Period	1,190,550	34	\$ 1,169,996	19.6%	\$ (1,390,996)	-16.3%
Analysis of Rate Realignment at end of Transition Period						
Volume at end of period					50,000	
Rate required at end of transition period (Total Cost - Monthly)					\$	5.54
Rate Change Required					\$	(0.46)
Percent Change						-8%
Annualized Customer Impact of Rate Change					\$	(276,000)

This scenario analysis indicates that at this rate and Customer Adoption Assumption, the DTS would under-recover the Total Costs of the Base Mailbox approximately \$1.4 million and recover approximately \$1.2 million more than the Direct Costs over the 34 month period.

Further, the DTS would be able to decrease the rate by 8% to \$5.54 at the end of the period resulting in a decreased annual cost to the existing customers at that time of approximately \$276 thousand.

APPENDIX C: Statewide Email – Rate and Volume Scenario Analysis

Scenario 3

This scenario assumes the low Customer Adoption Assumption and a rate of \$6.00 per mailbox:

Break Even Analysis given Volume and Rate Assumptions						
Customer Adoption Assumption:		Low				
Rate Assumption:		\$ 6.00 /mailbox/month				
Break Even Points	Volume	Period (months)	Cost Recovery Status at Break Even Point			
			Cumulative Direct Cost		Cumulative Total Cost	
			over/under	% Of Cost	over/under	% Of Cost
Direct Cost - Monthly	26,750	26	\$ (877,382)	-22.9%	\$ (2,543,091)	-46.3%
Total Cost - Monthly	45,000	71	\$ (9,595)	-0.1%	\$ (5,123,063)	-30.2%
Direct Cost - Cumulative		Over 84	\$ 592,355	4.2%	\$ (5,559,664)	-27.2%
Total Cost - Cumulative		Over 84	\$ 592,355	4.2%	\$ (5,559,664)	-27.2%
Total for Transition Period	720,550	34	\$ (797,628)	-15.6%	\$ (3,020,039)	-41.1%
Analysis of Rate Realignment at end of Transition Period						
Volume at end of period						30,000
Rate required at end of transition period (Total Cost - Monthly)						\$ 7.74
Rate Change Required						\$ 1.74
Percent Change						29%
Annualized Customer Impact of Rate Change						\$ 626,400

This scenario analysis indicates that at this rate and Customer Adoption Assumption, the DTS would under-recover the Total Costs of the Base Mailbox approximately \$3.0 million and under-recover the Direct Costs by approximately \$800 thousand over the 34 month period.

Further, the DTS would need to increase the rate by 29% to \$7.74 at the end of the period resulting in an increased annual cost to the existing customers at that time of approximately \$600 thousand.

APPENDIX D: Mobile Device - Cost Components and Operational Assumptions

Cost Components for Mobile Device

Identification Cost Component	Direct/ Indirect/ Shared	Categorization			Quantity Driver		Price		Monthly Cost Calculation		
		Environment	Cost Categories	Cost Type	Qty	Driver	Unit Price	Unit Description	Life Expectancy (in months)	Monthly Costs	Monthly Cost for calcs
Staff Salaries and Benefits - Mobile Device Support	Direct	Production	Variable	Ongoing	1	per variable staffing assumptions	\$ 97,460.00	per position	12	\$ 8,122	\$ 8,122
Staff training	Direct	Production	Variable	Ongoing	1	per staff	\$ 5,000	per position	12	\$ 417	\$ 417
Blackberry servers	Direct	Test	Fixed	Ongoing	1	per test environment	\$ 11,576.46	per server	48	\$ 241	\$ 241
Standard Windows Server Software	Direct	Test	Fixed	One-time	1	per server	\$ 7,874.37	per server	48	\$ 164	\$ 164
Blackberry Server Support	Direct	Production	Fixed	Ongoing	1	per blackberry server	\$ 625.00	per server	12	\$ 52	\$ 52
Blackberry T Support contract	Direct	Production	Variable	Ongoing	1	per blackberry user	\$ 25.00	per blackberry user	12	\$ 2	\$ 2
Blackberry Servers	Direct	Production	Variable	Ongoing	2	per cluster	\$ 11,576.46	per server	48	\$ 241	\$ 241
Standard Windows Server Software	Direct	Production	Variable	One-time	1	per server	\$ 7,874.37	per server	48	\$ 164	\$ 164
Blackberry Server Support	Direct	Production	Variable	Ongoing	1	per active blackberry server	\$ 625.00	per server	12	\$ 52	\$ 52
Facilities/PC-LAN	Indirect	Shared	Variable	Ongoing	1	Personnel Years (Pys)	\$ 1,405.92	per PY	1	\$ 1,406	\$ 1,406
Help Desk/Change Mgt./Network	Indirect	Shared	Variable	Ongoing	1	Server	\$ 112.86	per server	1	\$ 113	\$ 113
Security	Indirect	Shared	Variable	Ongoing		% of total expenses of CC requiring security		% of total expenses of CC requiring security			
Administrative Overhead (Admin, CDD, PPD)	Indirect	Shared	Variable	Ongoing		% of total expenses		% of total expenses			

OPERATIONAL ASSUMPTIONS for MOBILE DEVICE

Blackberry Servers per Cluster
Active Blackberry Servers per Cluster
Staff Assumption (users/PY)

2
1
5,000

Currently the DTS assumes that there will be one active and one failover server per cluster.

Based on the current ratio of staff support to volume of Mobile Devices, the DTS assumes that 1.0 PY of staff effort could support 5,000 devices. It is assumed that these responsibilities will be shared among the messaging staff and as such a the cost of a full PY does not need to be charged to the service but rather just the portion of messaging staff time projected to support the estimated volume of users.